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**OHIO COUNCIL FOR THE SOCIAL STUDIES**

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**THE REVIEW**

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**Summer 2004**

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The Ohio Council for the Social Studies is an affiliate of the  
National Council for the Social Studies.

*OCSS Review*  
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**2004**

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## Table of Contents

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### Summer 2004 Volume 40, Number 1

<i>The Review</i> Editorial Board 2004 .....	2
Notes on Contributors .....	3
Editor's Page .....	6

#### Peer Reviewed Articles Section 1

Thomas A. Kessinger

<i>Higher Standards, Tests, and Social Studies Professionals: Mutually Compatible or Exclusive?</i> .....	8
---	---

Denise Potts Ormerod

<i>Development of the Social Studies Model Curriculum: A History Teacher's Insiders Perspective</i> .....	14
---	----

William W. Wilen

<i>Promoting Active Learning through Discussion Strategies</i> .....	20
--	----

#### Peer Reviewed Articles Section 2

Theresa Tribbe and Mary Bridget Gurry

<i>Reading and Writing to Learn - Inspiring Middle School Students to Read Nonfiction and Write Research: The Social Studies and Language Arts Connection</i> ...	28
---	----

Shelly Sheats Harkness and Amy Poston  
*Nickel and Dimed: Using a Topical Theme to Create Opportunities  
for Students to Make Connections Between Social Studies  
and Mathematics*.....32

Joseph Hutchinson  
*Impressionism Project: Integrating Psychology and Mathematics via Art  
.....*40

Lars J. Helgeson  
*Teaching History, Geography, and the Cultural Importance of Minerals  
.....*48

Barbara Rucker and Kay E. Benjamin  
*Meeting the Challenge: Connecting Early Childhood Education to  
Social Studies Standards*.....57

James J. Sheehan  
*Utilizing Primary and Secondary Sources on the Internet:  
A Critical Analysis of the Brown V. Board of Education Decision*.....66

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## Editors's Page

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Dr. James J. Sheehan

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As I finish my third year as editor of *The Review*, I would like to thank the membership - social studies teachers, practitioners, academicians, and enthusiasts for your continued patronage. It is because of your support and commitment to the social studies profession that this publication continues to thrive.

In addition, I would like to thank the members of the editorial board who generously give of their time to review articles for our readership. This year's theme, "Social Studies Standards, Evaluation, and Assessment" is relevant in light of our implementation of Ohio's new academic content standards. This year and the years to come will illustrate the benefits and drawbacks of the new standards.

Contributors to this year's *The Review* wrote articles that focus on issues related to the social studies standards and assessment.

Thomas A. Kessinger's "Higher Standards, Tests, and Social Studies Professionals: Mutually Compatible or Exclusive" advocates that social studies professionals need to take responsibility for the new academic content standards and its implementation because standards, evaluation/assessment, and accountability are realities in 2004.

Denise Potts Ormerod's "Development of the Social Studies Model Curriculum: A History Teacher's Insiders Perspective" provides a first-hand account of the author's participation in the 9-12 grade level social studies standards writing team. The author shares a personal view on the process of designing the new academic content standards.

William W. Wilen's "Promoting Active Learning through Discussion Strategies" emphasizes teaching for understanding with specific focus on a variety of discussion strategies that can be used by social studies teachers to involve their classroom students. The author remarks that the more students are involved in quality learning based on standards and assessment models, the more they will learn.

Theresa Tribbe and Mary Bridget Gurry's "Reading and Writing to Learn: Inspiring Middle School Students to Read Nonfiction and Write Research: The Social Studies and Language Arts Connection" provides a practical approach that classroom teachers can adopt. The authors describe the integration of social studies and language arts by applying a multi-step process that help students gain a deep understanding of the topic, analyze their topic in relation to other important topics, and scaffold their learning

in reading and writing nonfiction.

Shelly Sheats Harkness and Amy Poston's "Nickel and Dime: Using a Topical Theme to Create Opportunities for Students to Make Connections between Social Studies and Mathematics" provides another practical approach that teachers can use in their classrooms. The authors describe the integration of mathematics and social studies to create opportunities for students to use concepts from both disciplines.

Joseph Hutchinson's "Impressionism Project: Integrating Psychology and Mathematics via Art" provides a practical approach that classroom teachers can use. The author describes the integration of psychology and mathematics using visual art. This combination of disciplines is a rare occurrence in high schools.

Lars J. Helgeson's "Teaching History, Geography, and the Cultural Importance of Minerals" explores the integration of geography, culture, and earth science in the study of minerals. The mythologies, ancient, and modern cultural uses of minerals are related to trade, maps, and geographical regions. These topics combined with the identification of mineral specimens stimulate student interest through a variety of approaches.

Barbara Rucker and Kay E. Benjamin's "Meeting the Challenge: Connecting Early Childhood Education to Social Studies Standards" shows that planning for instruction in early childhood settings does not have to present itself as a challenge. The authors advocate that instruction and activities should be developmentally appropriate, incorporate language with which children are familiar, provide opportunities for discussion and choice, and incorporate concepts that are meaningful and important to the lives of the children.

James J. Sheehan's "Utilizing Primary and Secondary Sources on the Internet: A Critical Analysis of the Brown V. Board of Education Decision" provides a practical approach that classroom teachers can use. The author describes the integration of online sources to promote the understanding of this seminal case in school desegregation.

Due to the overwhelming number of manuscripts submitted for this year's *The Review*, next year's theme will be on the same topic, "Social Studies Standards, Evaluation, and Assessment". Look forward to reading articles written by Gerard Zam, Ronald Helms, Jonathan Dawson, and others. For those who want to submit manuscripts for next year's *The Review*, submissions are due May 1, 2005. Manuscripts should be clear, succinct, well documented (for example: direct quotes with page numbers, paraphrased statements with citations), and conform to the APA guidelines. Citations and quoted materials must be accurate. In the letter to the Editor, authors should include their contact information (for example: home address, phone number, e-mail address) and state that their article has only been submitted to *The Review*. In addition, authors should submit five printed copies and mail them to the Editor for dissemination to the members of *The Review* editorial board. Authors with manuscripts accepted for publication should submit the following via e-mail: brief author's biography and final version of the article in a Word file.

Finally, I wish to thank those who have contributed articles in the past and I welcome your continued participation. I would also like to strongly encourage our membership (social studies teachers, practitioners, academicians, and enthusiasts) to contribute manuscripts to *The Review* germane to the broad discipline of social studies.

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## Higher Standards, Tests, and Social Studies Professionals: Mutually Compatible or Exclusive?

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Thomas A. Kessinger

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Standards, evaluation/assessment, and accountability are realities in 2004! So why is there some hesitancy or even resistance in accepting these phenomena? According to Pahl (2003), the “hot issue in the minds of today’s social studies teachers is standardized testing” (p. 197). Burroughs (2002) adds, “(a)cross the country, thirty states have mandated tests for social studies” (p. 315). Furthermore, the comment is often heard: What did I tell you, the federal government is going to dictate what we do in the states; some politician or bureaucrat in Washington, D.C. will decide what’s best for our students. In fact, Brady (2000) asks: “What should the young be taught?” And, answers: “No question we can ask ourselves is more important” (p. 649).

### A Nation at Risk and No Child Left Behind

There is ample evidence of the increasing importance given to standards, assessment, and overall accountability. The examples abound both at the national government and state government levels. For example, *A Nation at Risk* (1983)—a national educational reform report—although not a policy mandate or law, strongly encouraged higher or increased standards in its findings regarding expectations (see pp. 19-21). The report expressed in its recommendation section on standards and expectations:

We recommend that schools, colleges, and universities adopt more rigorous and measurable standards, and higher expectations, for academic performance and student conduct.... This will help students do their best educationally with challenging materials in an environment that supports learning and authentic accomplishment (p. 27).

More recently in the Elementary and Secondary Education [No Child Left Behind] Act (2001), standards and accountability again appear as the focus of the legislation; in the executive summary, one key component is “accountability and high standards.” Specifically, “(s)tates, school districts, and schools must be accountable for

ensuring that all students, including disadvantaged students, meet high academic standards” (NCLB, 2001, p. 2). According to an article in *The Economist* (September 27, 2003), the attempt or plan is “to raise national academic standards in America’s public schools” (p. 29).

In between these two reference points, two presidents—of differing political persuasions—articulated similar educational visions for the country: George H. Bush advocated his *America 2000* and William (Bill) J. Clinton served as the grand marshal of *Goals 2000*. Earlier, then-Governor Clinton of Arkansas was instrumental in encouraging his fellow state executives at a National Governors Association meeting to rally around the notion that educational improvement was essential for the country; and, the White House should lead this improvement.

### Social Studies Reform Initiatives in Ohio

Within the same time span, a similar movement was afoot in Ohio—and many other states—to reform its educational system. For example, in social studies the State Board of Education approved *Social Studies: Ohio’s Model Competency-Based Program* (1994) after a rigorous two-year process. The final product was viewed as an effort to build standards into the social studies by furnishing educators with a model curriculum. School districts were encouraged to use the *Model* as offering “direction for school districts required to develop their own competency-based education programs” (p. 1). The *Model* was divided into four main parts spanning grades pre-K through 12:

1. Suggested instructional objectives;
2. Suggested performance objectives;
3. Recommended strategies for assessments; and
4. A recommended program of intervention services (p. 1).

In order to “enhance the quality of social studies learning” across the state, the *Model* offered guidance to key school district personnel. Social studies mission and goals were identified as well as specific curriculum considerations (that is, scopes and sequences, rationales for cultural studies, and assessments or relationships to proficiency tests).

Regarding the proficiency tests, some test objectives were developed prior to the publication of the *Model*; and other test objectives were developed based on the *Model*. In those cases where objectives came before the *Model* those “test objectives will be revised in the future so that they are better aligned with the purposes of the *Model*” (p. 15). Thus, in some instances, the *Model* came *after* some tests.

In time the competency-based program for social studies was replaced or superseded by Ohio’s *Academic Content Standards: K-12 Social Studies* (2003), approved by the State Board of Education in late 2002. In this publication, social studies standards are expressed along with benchmarks and grade-level indicators. Specifically, the ACS include six content areas (history, people in societies, geography, economics, government, citizenship rights and responsibilities) and one process area (social studies skills and methods).

The major difference between the first and second attempts at standards reform or standards-based education in Ohio is that now standards (as of late 2002), curriculum

and tests would be aligned, and curriculum and tests would be devised *after* the standards were approved.

### Social Studies Professionals

How does all this relate to one who is a social studies professional (teacher or educator)? Or, another question is: In this era of standards and assessment—with a new emphasis on accountability—what exactly should be the reaction of the social studies professional? In a word: *professional*. The discipline of social studies has been at the forefront of professional thinking and behavior since the founding of the National Council for the Social Studies (NCSS)—the professional learned society or specialized professional association of social studies—in 1921. More recent efforts at fostering higher levels of professional involvement in social studies are in evidence.

In 1971, NCSS presented its position statement on *Standards for Social Studies Teachers*. This statement “has the classroom teacher as its primary focus” (p. 5). Why? The “teacher is the key figure in creating and sustaining the intellectual and emotional climate needed in the classroom to achieve the goals of effective learning” (p. 5). Included in this seminal publication are numerous and significant aspects (by section title) of the social studies teacher as a professional:

- I. Introduction
- II. Professional Preparation
- III. The Professional Education Staff
- IV. Screening Candidates for Social Studies Teaching
- V. Certification
- VI. Recruitment and Assignment of Teachers
- VII. Guiding and Directing the Learning Process
- VIII. The Teacher in the School Community
- IX. Basic Conditions for Teaching and Learning
- X. The Teacher as a Professional Person  
(pp. 5-12).

This position statement attempted to establish standards for the selection, preparation, and assignment of social studies teachers. It indicated the responsibilities of the teacher in guiding the teaching-learning process, and in the relationships that the teacher has with students, the community, and the profession.

Specifically in part seven, “Guiding and Directing the Learning Process,” the social studies teacher is “a facilitator of learning” who “exhibits behavior harmonious with the nature of the learning process, the nature of social studies as revealed in recent trends, and contemporary social realities” (p. 8). As such the teacher values each student regardless of individual differences; the teacher [as planner] “is cognizant of individual differences and plans a variety of learning activities to reach all students” (p. 9). Furthermore, the social studies teacher “views pupil progress and achievement in terms of understandings, intellectual skills, and affective behavior. Evaluation is regarded as a continuous process and the teacher devises a variety of instruments...to assess student growth” (p. 9).

Later, in part ten, “The Teacher as a Professional Person,” the teacher “has an

obligation to fulfill responsibilities which result in strengthening (the) profession” (p. 11). As such s/he “should ...actively work for the improvement of the teaching and learning of social studies” (p.11). The teacher has the duty to “initiate, execute, and evaluate local social studies curricula and programs” and finally, be able to “evaluate...new developments in the social studies and assist in the dissemination of these developments” (p. 12).

### Standards and the Professional

What this means is the social studies professional is ready and willing to teach even though the standards and testing debate continues. S/he is also “other focused,” meaning that s/he thinks about and considers what is best or preferred for those under her/his charge in order to deliver the best possible instruction with the best available means at a particular moment in time.

To assist in this endeavor, the NCSS (1994) published a 178-page statement on national social studies standards entitled *Expectations of Excellence: Curriculum Standards for Social Studies*. This document identifies ten thematic strands for the social studies, as well as specific components of knowledge and skills for the elementary, middle school, and high school grades. The document also contains sample lessons with related performance expectations; clearly, the focus is on the student or learner.

More recently, the NCSS (2000) offered its *National Standards for Social Studies Teachers*. This document was prepared by NCSS’ task force on teacher education standards. Here the stated standards reflect the subject matter standards (that are divided into same ten themes *and* five disciplines) as well as a set of pedagogical standards (nine items that focus on teacher knowledge, competence, and dispositions). Specifically, these standards reflect the “essential characteristics of the powerful social studies” or attributes of learner-centered instruction: “meaningful, integrative, value-based, challenging, and active” (NCSS, 2000, pp. 11-13; see also NCSS, 1994, pp. 11-12 and pp. 162-170 for the basis of these essential characteristics).

So how do professional social studies teachers react when acknowledging the presence and influence of state- (or even nationally-) mandated standards as well as tests? According to Burroughs (2002), educators today find themselves “in the midst of a complex and controversial conundrum called ‘accountability’” (p. 315). What this means is that if there are standards, and accountability is demanded, there must be a “a system of accountability that translates into a system of student assessment” (p. 315). So, even though the debate continues at various levels about the relationship between standards and assessment, “most educators do concur about one thing: The best...way to achieve the goals driving the testing debate is to address and answer the overarching and difficult question of how to best align curriculum, instruction, and assessment so that teaching and learning are optimized” (p. 316). This is precisely what Ohio is attempting to do (see Zelman, 2002, p. 1-3, 5).

Yet, Pahl (2003) observes: “Although most national and state organizations have strongly supported the standards and standardized testing movement, many rank and file social studies teachers have opposed the movement with words and actions” (p. 197). Then, what is the current position of the NCSS on standards vis-à-vis teachers? According to the NCSS (2000), “the multiple pushes toward more rigorous subject matter standards for students and greater school accountability for student learning have been

implemented nation-wide in the form of new state regulations and legislation that have put into place higher standards for students, teachers and schools” (p. 8). The bottom line is that once the subject matter is determined and how much of it students should be held accountable for, “teachers should be held accountable for teaching...” (p. 8).

Recall that “social studies teaching and learning are *powerful* when they are meaningful” (p. 12); and, to achieve this meaningfulness, the “teacher is reflective in *planning, implementing and assessing* [author’s emphases] instruction” (p. 12). Schmoker (1999) frankly states:

In any subject area, students and teachers want to know where they stand in relation to achievable standards. When we work to improve—at anything—knowing how well we’re doing is essential. An increasing amount of evidence indicates that providing this information helps students (p. 98).

### Conclusion

Due to the changed educational environment today, professional social studies teachers or educators need to assist their students in recognizing and understanding the emphasis placed on accountability that includes concomitant stress on both standards and tests (even high-stakes tests). What this means is that these teachers must continue to engage their students and promote the best possible teaching-learning combination of curriculum and instruction with the awareness that students must meet new standards as evidenced by acceptable (passing) test scores. Indeed any professional will strive to prepare her/his students to do well by whatever standards, curriculum/instruction, and tests that are either imposed or suggested. In the end, if students are taught effectively, most students will do well—no matter the test given. As a result, these teachers or educators—based on the definition of professional—will have acted in their students’ best interests and be viewed as very *professional!*

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## **Development of the Social Studies Model Curriculum: A History Teacher's Inside Perspective**

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**Denise Potts Ormerod**

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**S**enate Bill 1 requires that the Ohio Board of Education develop clear academic standards for the students of Ohio. The first step in this process was the development of academic content standards by educators, parents, and members of the business community. The standards for social studies were adopted December 10<sup>th</sup>, 2002. Following adoption of the standards, the Senate bill provided that a model curriculum be designed and produced within 18 months. In response to this mandate, the Ohio Department of Education established model curriculum writing teams. The writing teams' mission was to further assist in improving students' achievement by creating lessons that clearly aligned to the standards.

Being a member of the Social Studies Model Curriculum writing team has been an extraordinary experience because of the insight I gained pertaining to the process of curricular change and improvement. I also learned a lot about myself as a professional. I was one of twenty-nine educators (preschool through higher education) selected from across the state. Our responsibility was to research, create, draft, edit, and revise a series of lesson plans designed to assist Ohio teachers prepare students to successfully meet the rigorous expectations set by Ohio's academic content standards for social studies. Our work started during June, 2003 and was recently finished in February, 2004. I was a member of the 9-12 grade level team with each member being responsible for a variety of lesson plans based on specific benchmarks and grade level indicators. These lessons will be available for access by all teachers and educators on the Ohio Department of Education's Instructional Management System Web site. During my participation in this process, I came to have a better understanding of the necessity for the standards and how they will affect my role as a classroom teacher. This progressive revelation is what I want to share with you.

### My Curriculum Team Experience

During the 2002-2003 academic year, I was in my third year of classroom teaching at Lakeview High School which is in the Lakeview Local School District situated in Trumbull County. I was serving as department chair and teaching both 10<sup>th</sup> grade U.S. History and 11<sup>th</sup> grade Government. I had attended workshops on the High School Graduation Qualifying Exam and was attending workshops to familiarize myself with the new the Ohio Graduation Test (OGT). Ohio Department of Education presentations at the Ohio Council for the Social Studies annual conference also kept me current. Having attended these workshops and sessions, I believed I had a good grasp on the state's expectations and since the exam would not be given until the spring of 2005, I felt ahead of the game.

Many of my peers did not have a favorable reaction to the new standards and/or the OGT. During the workshops and conference sessions, I continued to hear attendees express their opinions such as: "who writes these things?" or "have they ever been in a classroom?" and the infamous expression, "this is teaching to the test!" Despite the misgivings expressed by so many others, when the opportunity arose to apply for the Social Studies Model Curriculum writing team, I jumped at the chance. If I made the team, I could at least get answers to questions my peers and I had and maybe even implement ideas I had about improving the standards.

I received notification that I had been selected to serve on the model curriculum team and that there would be ten sessions held in Columbus during 2003-2004. Included in the selection packet was the ever-present informational paperwork to be filled out and mailed back to the Ohio Department of Education. I completed all my forms and headed off to the post office. As the postal clerk took my envelope, I realized that I was now working with the Ohio Department of Education. I was not completely sure what that would entail, but I would soon find out.

I attended my first meeting the week of June 16, 2003. The initial session was a combined orientation meeting for both the social studies and science writing teams. All participants were given a three-ring binder with the agenda for our sessions and a handout of a PowerPoint presentation that we would view. The packets that were distributed for each session were invaluable reference tools for information and lesson planning ideas.

The session consultants launched the session by asking "what are the components of standards-based education?" We were instructed to discuss our ideas with those at our table. The educators at my table started jotting down their ideas on Post-its that had been supplied. While the others at my table began jotting down their ideas, I became a little anxious. I had no academic background regarding standards-based education (SBE), and did not know what the components were. However, after listening to the definition of what standards-based education encompassed, I felt much better. Without having known the acronym, I realized that I had already implemented many of the elements of standard-based education in my classroom instruction and activities. I was a teacher who often asked myself, what had the students learned rather than how well had I taught. The two days in Columbus became an opportunity for not only me, but all members, to examine and reevaluate our teaching practices. I began to understand and gain insight into the importance of SBE to the Ohio content standards and I became less anxious.

During these first sessions I had also availed myself the opportunity to get to

know all twenty-nine members of the ODE's model curriculum writing team. I ascertained that each member had something special to offer. Some were national board-certified, some had been members of the social studies academic content standards writing team, others were Fulbright scholars, and almost all were veterans of the classroom. I felt humbled by the knowledge and experience which surrounded me. I was impressed by their continuing love of the profession and their desire to be part of this endeavor.

As the writing team continued to meet during July and August, the members were divided into grade bands. I was assigned to the 9<sup>th</sup>-12<sup>th</sup> band and this group was composed of nine members from a variety of instructional backgrounds. There was one professor, one retired teacher, one vocational teacher, three inner city teachers, and three rural teachers. This diversity of instructional experiences proved to create a unified team.

Meeting new people was fun and interesting, but we were there to work. Each member was assigned certain benchmarks and indicators, then asked to incorporate these into four lesson plans. The ODE consultants were very accommodating in delegating these tasks. Since I am primarily a tenth grade U.S. history teacher, all of my lessons were within this grade level and I was very pleased that the lessons I would create were within my expertise and directly applicable to my classroom.

One of my assignments was History Benchmark F 9-10 Indicator grade 10-9 (Analyze the major political, economic, and social developments of the 1920s), including the Red Scare, women's right to vote, African-American migrations from the South to the North, immigration restrictions, nativism, race riots, and the reemergence of the Ku Klux Klan, the Roaring Twenties and the Harlem Renaissance, and stock market speculation and the stock market crash of 1929.

I began to quickly brainstorm numerous possibilities for this lesson. If the students were to analyze all the cultural developments listed, perhaps a timeline would be a good starting point. The students could use the media center resources to investigate one or several events in more depth. Maybe I will have the students work in groups and thereby be able to share their knowledge. I also thought that the groups could create a scrap book of the era. In this way the artistic students could demonstrate their skill. The possibilities seemed endless!

The first assignment back at Lakeview was to design pre-/post-assessments for the above lesson and two others. I first had to decide what theme my benchmarks and indicators would address. I worked diligently and sought to find an array of techniques to assess what students should know. Creating the different types of assessments was the easy part. These assessments were also to include rubrics with measurable criteria. This aspect was a challenge, but I knew I would have my committee colleagues and the employees at the ODE to assist me.

A later task was to develop complete lesson plans. When mine were in draft form, I took my drafts back to Columbus to have them evaluated. The evaluation used a "tuning protocol process" and was done in a very methodical, yet non-threatening manner. This procedure included a small group of participants sharing lessons and then, after reading the lessons, we jotted down questions or suggestions. The author then had the opportunity to explain his/her lesson. After clarifying questions were asked and group discussion we would then give our edited copy back to the author with our suggestions. This was the process that we generally used and I felt the time devoted to the process was used effectively and wisely.

Looking back at this process, the difficulties that most of the members faced (including myself), were aligning our assessments to the grade-level indicators. While our assessments were practical and useable, we struggled to make sure that they matched the required skills. We had to keep in the forefront of our minds that the indicators stated specifically what the students should be able to do (analyze, explain, examine, and describe). At times, this was frustrating and in some instances an assessment had to be completely rewritten. However, teamwork and guidance from the consultants pulled us through. Subsequent sessions required fewer revisions. After all, practice makes perfect.

I would be remiss if I did not mention that during our July meeting we had several guest speakers who were quite helpful as resources in our work. Wendy Stocia, from the Ohio Department of Education, spoke to us about exceptionality and differentiation. The term *differentiation* was a new one for me. But after finding out that it is creating alternative methods of instruction to assist all learners, I felt relieved. Many of the recommendations on how to differentiate instruction were ones that I had already utilized in my teaching. All model curriculum team members incorporated differentiated instruction in their lessons for students working toward the standards and for those working beyond the standards.

Dan Langen, who is the Curriculum Specialist for Mason City Schools, spoke to us on the application of instructional technology in classroom. Of course, everyone thought this meant using presentation software, showing videos, or having the students surf the Web, but he explained that it is much more. Integrating technology begins with a solid lesson. It is then the teacher's responsibility to select the appropriate resources that are available to their students. Software tools can broaden the range of classroom activities. This can include office applications allowing students to create brochures, newsletters, graphs, and charts. If surfing is desired, then the teacher guides the students to pre-selected web sites. The fusion of technology and traditional instruction can enhance the overall learning experience.

By early August, we were to have completed three of our four lesson plans. To accomplish this task, we were supplied a template which is not the lesson planning format familiar to most teachers. In order to frame our lessons in the acceptable format we used our tuning protocol process which involved each group member applying a specialty in the process. One member was the grammatical expert who could easily pick out misspellings, provide alternative terminology, and such. Another member was the alignment expert who always made sure the lesson met the benchmark and indicators. We also had a duration specialist who visualized the lesson as taught in the classroom and anticipated the time it would take to complete. Devising creative, fun, and relevant activities for differentiation and extensions was the responsibility of the fourth member, which became my role.

Our lessons were eventually ready for field testing by peers and students throughout Ohio. My thoughts were a mixture of uneasiness and accomplishment. Of course I wanted the students and their teachers to enjoy my lessons, but the goal of focusing on transposing the standards into viable lessons superceded my personal achievement.

As I further developed my lessons, I continued to concentrate on applying the standards and this influenced the instructional method and materials I selected. I began to ask myself, to what extent does the lesson provide students with a greater understanding of the indicator. Will photographs, primary documents, or other strategies I choose

prompt students to think critically and be able to articulate their comprehension of the subject matter? Will students be able to connect events and circumstances of the past with events and circumstances occurring today? It was then that I realized that through the process of applying the standards my vision of teaching had changed. The process has forced me to re-think what I teach and how I teach. Most importantly my focus must remain on the students' learning outcomes.

### Reflections on the Experience

As I reflect on my participation as a member of the model curriculum model writing team, many thoughts go through my mind. First, unlike some educators, I never had a problem with the academic content standards, or the concept of the Ohio Graduation Test. Considering the challenges of teaching social studies, I regard the standards as a benefit because they are guidelines that we all can follow. Instead of trying to cover everything, we now have curricular focus, which is best for both students and teachers.

Second, while the standards may identify the subject matter, the way I teach the material is not mandated. Thus, I am able to apply the techniques, methods, strategies, and materials that benefit my students the most. The personnel at the Ohio Department of Education are cognizant that teaching techniques and learning styles are as unique as each classroom of students. Throughout the development process the consultants encouraged members to implement more methodological variety in the classroom. They introduced many of us to the research of Robert Marzano (2001) and segments of his *Classroom Instruction That Works* were required reading for all writing team members. I have found that using the teaching strategies researched by Marzano not only promote more active teaching but also fashion a more challenging and engaging classroom. Instruction does not have to be plodding or relentless in order to teach to standards and benefit the students.

Third, the standards will not be a restricting influence on my teaching. Knowing which specific areas have to be covered, challenges me to go beyond the information contained within the textbook. Creating and critiquing these lesson plans have helped me recognize what good teaching entails. A lesson or unit needs to be rigorous, engaging, relevant, and, of course, aligned to the standards. An effective lesson consists of more than the summaries that are written in a typical two-inch square space that most lesson plan books provide. Effective teaching needs to be powerful to match the high expectations I have for my students' learning.

Finally from this past year of extensive and intensive work for the ODE, I know I have come to appreciate the instructional improvement process. I have also learned more about myself as a teacher and I know my students will benefit from the active learning lesson plans I designed. I am looking forward to using the Instructional Management System (IMS) to find lesson plans my peers designed anticipating I will find new ideas that will help me improve further. I also look forward to sharing what I have gained with other social studies teachers. This article is an attempt to start achieving this goal.

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## Promoting Active Learning Through Discussion Strategies

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William W. Wilen

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**T**here is an old expression that is powerfully suggestive of what theory and research is “saying” today about how students learn best with major implications for how teachers should teach:

“Tell me, I forget... Show me, I remember... Involve me, I understand”

While students clearly need to be told and they need to be shown, social studies teachers need to also get them involved. The more they are involved in quality learning based on standards and assessment models, the more they will learn through understanding. This article is about teaching for understanding with specific focus on a variety of discussion strategies that can be used by social studies teachers to involve their classroom students.

Parents will remember being lectured to by the teacher with knowledge being transmitted to students in hopes that they would recall it for the test. This instructional format represents classical behaviorism because the belief is that knowledge exists independently and outside of the learner with the teacher serving to transmit that knowledge which students receive through the senses (primarily verbal and visual experiences). Once this stimulus-response bond is reinforced, learning occurs. But, more often than not, students quickly forget the information regardless of positive teacher comments or good test scores.

Students of particularly current and informed teachers, though, are increasingly becoming exposed to a learning theory in classrooms labeled “constructivism” with the view that knowledge is individually created by learners and is influenced by their experiences and culture. While there are different forms of this theory, learning generally occurs when students are challenged with new knowledge, perhaps in the form of problems, connections are made to students’ previous learnings, and the teacher and students collaborate in making meaning through social interaction. The more students are involved in vicarious, simulated and direct experiences, the greater the probability learning will occur, be retained, and be transferred to other situations. The teacher’s role is not just to serve as the source of knowledge but also to facilitate learning through challenging and authentic learning activities, and through establishing collaborative experiences exposing students to different perspectives. The more students are involved

by doing, the more they will understand and, therefore, learn (Scheurman, 1998).

Two major sources of information and research supporting a constructivist view of learning have been the work of Zemelman, Daniels, and Hyde (1998) and Good and Brophy (2003). Working independently, they have derived principles of teaching for understanding that can help guide social studies teachers as they plan lessons purposely designed to actively involve students in the learning process. Zemelman, et.al. derived principles of best practice from reviewing the recommendations of many national curriculum reports in the United States. The reports represent the work of major professional education organizations as they have attempted to define best educational practices over the past 15 years. Good and Brophy reviewed the research on teaching the major academic school subjects in the United States, including social studies, and derived basic elements of effective subject matter teaching. These two independent efforts yielded remarkably similar findings about how students learn best with implications about how teachers should teach. This article identifies discussion as the most effective strategy to achieve goals related to the most essential principles of best practice and elements of effective subject matter teaching.

### The Nature of Classroom Discussion

How can classroom discussion be used to achieve principles of best practice and elements of effective subject matter teaching? How can discussion be used as a strategy by teachers to achieve constructivist ideals and teach for understanding? Wilen, Bosse, Hutchison, and Kindsvatter (2004) defined classroom discussion as an educative, reflective, and structured group conversation with and among students about subject matter. "Conversation" is the central feature of this conceptualization of discussion because the interaction between a teacher and students during a discussion should be more open and free flowing than it is during a recitation, for example. Less structure encourages the projection and examination of thoughts and feelings. Classroom talk needs to be more natural and variable as reflected in the interaction pattern. The conversational quality of a classroom discussion increases the possibility that students will be able to make connections between what they know and have experienced, and new information. Social interaction with and among students provides opportunities for students to construct new perspectives and develop deep understanding.

### Encouraging Students to Actively Participate in Discussions

What can a teacher do to encourage students who are struggling with learning and reluctant to participate in class discussion? Information drawn from studies involving elementary, high school, and teacher education students suggests several general guidelines that increase the probability unconfident and reticent students will participate:

- Create a positive social emotional classroom climate in which the teacher overtly demonstrates caring for students as people and respect for their ideas during discussions.
- Design, practice, and model essential rules for democratic classroom discussion.
- Prepare students for the discussion because preparation builds confidence to participate.
- Select discussion topics, issues, and problems with students' interests and

experiences in mind.

- Balance large group discussion with small group discussions.
- Apply sound issue discussion practices such as calling on non-volunteers, using wait-time, and probing initial student responses (Wilens, 2004).

### Discussion Strategies

Four discussion strategies follow that vary from very basic and simple ways to stimulate interaction to complex ways to encourage high level conversation. They are appropriate for the wide range of grade levels and ability levels of social studies students. The purpose of discussion is, of course, for students to think about topics, issues, and problems and to interact with the teacher and other students as they express perspectives, opinions and views. Another characteristic of the discussion strategies is that they can be combined. For example, Peer Discussions might be used to have students preliminarily consider views about an issue in preparation for a more extended Fishbowl Discussion. Six Thinking Hats could also easily be used to prepare students for a Fishbowl Discussion. Think-Pair-Share could be used with any of the other discussion strategies. In order to illustrate how the four discussion strategies might be applied in the social studies classroom, the topic of the internment of Japanese-Americans during World War II will be used.

#### Think-Pair-Share: Application to the Social Studies Classroom

This is a very simple, efficient, but effective cooperative learning strategy used by many teachers to get students immediately involved in discussion about a topic, issue, or problem. The teacher will find this a convenient strategy to incorporate into a lesson as a planned approach or it could be used spontaneously as the need arises. As the title suggests there are three steps. Pose a thought-provoking question for the students to answer. You might have the students individually write down their thoughts. This phase lasts only a minute or so. Next, pair each student up with a neighboring peer for them to discuss their answers or thoughts for five minutes or so. Finally, have them share their answers and ideas with the whole class. Large group discussion is enhanced because students have had the opportunity to think about and discuss their answers with a peer before presenting it to the larger group. Preliminary conversation builds understanding and self-confidence “off-stage” before going “on-stage” before the whole class (Kagan, 1992).

Before the students read about the internment:

- Project a photograph from the Japanese-American internment camp at Manzanar in California, for example, onto a screen and ask students who and what do they think are portrayed in the photograph, and where and when was the photograph taken? You are not looking for correct answers at this stage; only intending for them to analyze and speculate preliminary to in-depth investigation (photos can be downloaded from [www.oac.cdlib.org/findaid/ark:/13030/tf596nb4ho](http://www.oac.cdlib.org/findaid/ark:/13030/tf596nb4ho) or [www.geocities.com/Athens/8420/camps.html](http://www.geocities.com/Athens/8420/camps.html))
- Consider the terms “internment camp” and “concentration camp,” which were both used by President Roosevelt in reference to the incarceration of Japanese-Americans during WWII. To what extent is there a difference?
- What are “civil rights” and what are some examples? Consider the importance

of civil rights in your lives.

- Read, “To Do What Was American” which is a short oral history about a Japanese American family leaving for and settling into their internment camp and how they celebrated the 4<sup>th</sup> of July at that camp (found in Linda Monk, editor, Ordinary Americans. Alexandria, Virginia: Close Up Publishing, 1994, pp. 192-94). What are some of your reactions to their sense of patriotism?

#### Peer Discussion: Application to the Social Studies Classroom

A very quick and basic approach to stimulate discussion of an issue, problem, or topic is to have students initially formulate questions based on pre-arranged question starters. Students’ completed questions then become the basis of small group discussions. Teachers will find this a convenient way to initiate students into the world of discussion because the structure makes it easier to begin forming questions that serve as the basis for interaction. The first step is to have students view a video, read a current event article, watch a television program, or read editorials related to a current societal issue designed to challenge their thinking and feelings. Hand out “Questions for Peer Discussions” and have the students select three question starters to complete. Once they have formed their questions, place them into groups formed either on the basis of random assignment or a variety of pre-arranged characteristics (academic ability, gender, ethnicity, and so on). Students then are to try to answer all their questions based on their own knowledge and that from the original source with which the students had to work. Each group might then select one question that they thought was the most provocative, challenging, or controversial to ask of the whole class when it re-convenes. The teacher would then guide the whole class discussions (King, 2002). Examples of questions include:

- What is a new example of .....?
- How would you use ..... to .....?
- What would happen if .....?
- What are the strengths and weaknesses of ...?
- How does ..... tie in with what we learned before?
- Explain why ..... Explain how .....
- How does ..... affect. ....?
- What is the meaning of .....?
- Why is ..... important?
- How are ..... and ..... similar? How are ..... and ..... different?
- What is the best ..... and why?
- Compare ..... and ..... with regard to .....
- What do you think causes .....?
- What conclusions can you draw about .....?
- Do you agree or disagree with this statement: .....? (Support your answer)

Several major constructivist principles are accommodated when using Peer Discussions. The most obvious ones are that students would be challenged to create questions based on their knowledge and perspectives and they would be socially interacting within a small group situation. The question and answer format is more of a student guided recitation rather than a discussion because of the interactive format (question – response – reaction). But, like Think-Pair-Share, this is a beginner’s strategy designed to develop students’ skill and confidence in question formation and question

answering, which are the basis of a more reflective conversational discussion. Another constructivist characteristic is that Peer Discussions is collaborative since students work to answer each other's questions and they should use consensus to decide on one question of interest to present to the whole class.

Primary sources related to the internment would be excellent ones to stimulate thinking and interaction. Examples include:

- President Roosevelt's Executive Order No. 9066 which authorized the Secretary of War to establish the internment camps which can be found at: [www.fatherryan.org/hcompsci/eo.htm](http://www.fatherryan.org/hcompsci/eo.htm).
- Original articles from The San Francisco News, especially during March and April, 1942 since it carried almost daily reports of FBI and police sweeps, and the various proclamations, plans – and restrictions to civil liberties – issued by military officials (approximately 75 of these news articles can be obtained at [www.sfmuseum.org/war/evactxt.html](http://www.sfmuseum.org/war/evactxt.html)).
- Letters from Japanese-American children internees to a San Diego librarian during internment: [www.janm.org/breed/title.htm](http://www.janm.org/breed/title.htm)

### Six Thinking Hats: Application to the Social Studies Classroom

DeBono (2000) created a structure to help students thoughtfully and visually examine an issue or problem in small groups, which then can be used to involve students in a large group discussion. Six Thinking Hats teaches students to look at an issue from many different sides; not the one or two views that students are used to. Five of the six thinking hats correspond to different perspectives on an issue with one hat to be worn by the student small group leader. Have the students randomly number off by sixes or use a cooperative learning group approach of forming heterogeneous groups based on academic ability, gender, ethnicity, and so on. Students in their small groups are to consider the issue from the perspective of the “hat” they are wearing and discuss their views about how to depict a unified perspective. For example, red thinking hat students are to take the position of a highly emotional person expressing his or her feelings exclusively from the heart. They are to communicate their feelings in a drawing that can include words. Pass out a fairly large piece of paper to each group along with a set of crayons, magic markers, or colored pens or pencils. Listed below are the different thinking hat perspectives for which the students are to depict their views. One blue hat student is to be assigned to each group since he or she will be the spokesperson when reporting to the large group. Have each group show its drawing and explain the perception as reflected in the corresponding thinking hat. Once students have presented their drawings, reconvene as a whole class. The differing views presented by the students can then be used as a springboard for a discussion with students' own views being presented.

The six thinking hats is a way of providing a trigger for thinking in different ways about issues. Each hat represents a different thinking orientation.

- **THE WHITE HAT** (neutral and objective, concerned with facts and figures, you respond like a computer with no emotion, include proven facts and information thought to be true)
- **THE RED HAT** (emotions and feelings, “This is how I feel about the issue!”; never justify your feelings, just let them go, can include anger or fear together with hunches, intuition, no criticism of self or others' feelings)

- THE BLACK HAT (for gloom and negative thoughts, “What’s wrong with it!”, critical judgment, pessimistic view or negative assessment, black hat thinking points out faults, risks, dangers of now or the future, ask negative questions)
- THE YELLOW HAT (for brightness and sunshine, the positive thinking hat, focus is on optimism and benefits, where we are constructive, can include the rational as well as dreams, you can speculate on how wonderful things can be)
- THE GREEN HAT (green for new growth, new ideas, new concepts, new perceptions, alternatives, alternatives and more alternatives, emphasizes change and a new approach to problems, be imaginative and show how creative you can be)
- THE GRAY HAT (the chairperson’s hat, keeps the focus, cool control and monitoring (DeBono, 2000))

The Six Thinking Hats is primarily a small group discussion strategy and therefore social interaction among students is the primary constructivist characteristic. Students construct meaning as they discuss the ways their thinking hat perspective is to be depicted in a drawing. Critical thinking is the basis for interpreting the thinking hat perspective and creative thinking is involved as students design their drawing. Having the students depict their views in a drawing taps into their spatial abilities, which is not a characteristic of the other discussion strategies. This experiential, hands-on activity can involve other students who are not as linguistically oriented. Democratic decision making is emphasized as students individually discuss different views with the goal of arriving at one way to depict their thinking hat’s perspective.

An example of an issue that would get students considering a variety of perspectives related to the Japanese-American internment would be individual rights versus national security. A teacher might engage students in two rounds of Six Thinking Hats. Each round would focus on definitions associated with each term to help them understand the basics of the issue:

- Individual Rights – “a power or privilege a person is justly entitled to and that cannot be infringed upon by the government.”
- National Security – “a condition of safety for a country brought about by defending it against invasion, espionage, sabotage or control by foreign powers.”

Another issue associated with the long lasting effects of internment is reparations or the attempt to compensate Japanese-Americans for their loss of homes, jobs, and personal possessions that many had to give up when they had to move into the camps. Students could “put on” their thinking hats to express thoughts and feelings related to the word, “reparations.”

#### Fishbowl Discussion: Application to the Social Studies Classroom

Another discussion approach to actively involve small groups of advanced students is the Fishbowl. Students initially work in small groups reading about, investigating, and discussing an issue or problem. For example, “Should the USA restrict people coming into the country and, if so, under what circumstances?” Have each small group send one representative to sit inside the Fishbowl, which is an inner circle around which the remainder of the class sits. So, in effect, you will have two concentric circles. The student representatives inside the Fishbowl discuss the issue using information and conclusions drawn in their representative small groups originally created for the purpose

discussion and arriving at a consensus. The students in the outside can communicate with the students in the Fishbowl by passing notes. Another alternative is to allow students in the outer circle who want to participate in the Fishbowl to tap his or her student representative on the shoulder after 10–15 minutes of the discussion. This move would naturally broaden student participation (Grambs and Carr, 1991).

Constructivist characteristics include selection of an issue or problem of interest to the students and the potential for students to make meaning through social interaction in the initial small groups and then the Fishbowl. The potential for the discussion to become thoughtful and conversational is high because of the preparation students have had in their small groups for the Fishbowl. Students are challenged as they work to deal with a controversial issue and even more so if they are further challenged to propose solutions to the problem. Consensus building and decision making are also important democratic principles.

Examples of Fishbowl questions that lead students to investigate library and Internet sources for answers related to the Japanese-American internment include:

- What would have been the right balance between the rights of the Japanese-Americans and the need for the United States to maintain its national security during World War II?
- Almost 50 years after President Roosevelt issued Executive Order 9066, through the efforts of leaders and advocates of the Japanese-American community, Congress passed the Civil Liberties Act of 1988. Popularly known as the Japanese-American Redress Bill, this act acknowledged that “a grave injustice was done” and mandated Congress to pay each victim of internment \$20,000 in reparations. The reparations were sent with a signed apology from the President of the United States on behalf of the American people. The period for reparations ended in August, 1998. Was this appropriate compensation for what the Japanese Americans lost, endured, and sacrificed?
- In response to the September 11, 2001 terrorist attack by al Qaeda killing thousands of people, the USA Patriot Act was passed by Congress. How are the conditions that brought about both the Executive Order 9066 and USA Patriot Act similar and different? (Patriot Act of 2001 can be found at: [www.epic.org/privacy/terrorism/hr3162.htm](http://www.epic.org/privacy/terrorism/hr3162.htm))
- How should the issues of individual rights and national security be balanced under the USA Patriot Act of 2001?

### Conclusion

Findings from major research studies convincingly suggest how students learn best with implications about how teachers can instructionally accommodate them. Constructivism is the label we have given to characteristics common to findings from the best educational practices and elements of effective subject matter teaching research. This view of learning and teaching assumes students come to make meaning and learn best when they make connections between what they know and the new information, and to think about and apply new learnings while engaged in a variety of socially interactive situations. The teacher is essential in facilitating this learning atmosphere and discussion is the instructional strategy that the literature suggests has high potential to facilitate this learning goal. Four varied and flexible discussion structures have been presented to

demonstrate how constructivist ideals might be transformed into classroom practice. Specific illustrations of how the discussion structures can be applied in social studies classroom situations have been described to assist teachers as they consider the value and practical application of new ideas. If the goal is students' high level thinking and application in a standards based curricula, active learning through discussion is effective in teaching for understanding.

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## **Reading and Writing to Learn - Inspiring Middle School Students to Read Nonfiction and Write Research: The Social Studies and Language Arts Connection**

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**Theresa Tribbe and Mary Bridget Gurry**

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**M**iddle school students and social studies research reports – these two ideas seem to go hand-in-hand. But getting students to research something thoroughly, analyze the information and then synthesize it in their own words is the hardest part for most social studies teachers. The difficulty in synthesizing facts and information into something new is particularly difficult for younger middle school students in fifth or sixth grade. The temptation to copy information verbatim or to leave out citations and claim it as their own is strong. Middle school students need much guidance in how to make a research paper their own. Regie Routman (2000) writes,

While learning how to write a research report is a valuable skill – and students need to learn how to find resources, collect information, take notes, summarize – it is not inquiry unless it also engages the student and involves choosing which questions to pose, what investigations to conduct, and how to present the knowledge gained.

The Ohio social studies academic content standards (2003) expect students to “collect, organize, evaluate and synthesize information for multiple sources to draw logical conclusions” (Academic Content Standards: Social Studies, K-12, 2003). The purpose of this paper is to describe how teachers can have students read multiple sources of information, determine the most important information, and synthesize that information into a final product such as a research report. In reading nonfiction and writing research, Tierney and Shanahan (as cited in Allen, 2000) make the point that “the more content is manipulated, the more likely it is understood and remembered. In accordance with this thesis, a number of researchers have hypothesized that writing will have an impact upon what is learned because it prompts learners to elaborate and manipulate ideas” (p. 266).

### Multi-step Process

There are six steps in this process to help students thoroughly read nonfiction and write a synthesis of the information. The students work in groups as they research their topic, and then move to write individually. They return to their groups throughout the process, to exchange ideas and bring together their findings. This step-by-step process, along with active, social learning, keeps middle school students involved along the way.

#### Step 1

First, students are organized into base groups (Johnson, Johnson & Holubec, 1994) with other members of the class. These groups will work together throughout the whole project to pull ideas together. Each student in the group is responsible for teaching important information once he becomes an expert. Because teachers know who works well together, base groups should be established by the teacher.

Each group is assigned a general topic of study, according to the district's current social studies course of study or social studies academic content standards for the particular grade. This project would work well with concepts such as biographies of famous historical women – Harriett Tubman, Eleanor Roosevelt, Sojourner Truth, Florence Nightingale, and Susan B. Anthony, for example. Fifth-grade students could be assigned regions of the United States. Sixth-grade students could be assigned countries within one continent such as Congo, South Africa, Kenya, and Liberia within the continent of Africa). Members within each base group are responsible first for locating preliminary information about a subject within their general topic of study such as selecting Susan B. Anthony if the general topic is historical women (see step 6). Students should be encouraged to find reference books including encyclopedias, Internet sites, their textbooks, and so forth on their topic. Once they have this information together, the group members analyze the information, noticing how the books, articles, web sites, and additional sources have the information broken down. Students should access the table of contents, headings/subheadings and general lay-out of the sources to begin to see how the authors believed it was important to convey information. As a base group, students then determine four to six categories they believe will thoroughly represent the topic of study. For example, with famous historical women – categories may include the following: “life in her day”, her mission, her accomplishments, and obstacles she faced.

Fifth-grade students studying the regions of the United States may determine that their categories are geography, economics, culture, climate and interesting facts. Teachers can obviously guide students in their selection of category headings, but it has been my experience indicates that groups generally come up with the same category ideas but may call them different names.

#### Step 2

Once student groups have determined their categories, students move into researching information for each category. For example, if researching Susan B. Anthony, begin by reading sources to find information to include under “what was life like during her time in history”, her mission in life, her accomplishments and the obstacles she faced.

The critical piece of gathering information at this stage is that students record bits and pieces of information, placing each idea under its appropriate heading in a data bank (Polette, 1998). Students are encouraged to record small pieces of information, not entire sentences and to cite where they got the information on the data bank. Teachers can determine the number of references students must cite. See sample chart below.

<b>Susan B. Anthony</b>			
<b>Life in her day</b>	<b>Her mission</b>	<b>Her Accomplishments</b>	<b>Obstacles she faced</b>
women did not have the right to vote (Davis, 1998)	equal rights for women (Encyclopedia)	Worked to pass 19 <sup>th</sup> amendment (susanbanthonyhouse.org)	arrested for voting (Davis, 1998)
born into a Quaker family (susanbanthonyhouse.org)	Equal rights for slaves (Davis, 1998)		women excluded from many jobs men held (susanbanthonyhouse.org)

The data bank gives students a place to record information, **without copying it**, from multiple sources and at the same time analyze it to determine where the information should best be recorded for later use. Teachers can determine how many pieces of information students must have for each category of the data bank. Middle school students should be able to easily record at least 5–6 in each category.

### Step 3

Students come back together as a base group to share information gathered. At this point, each student is an expert on his topic and can easily discuss it with the group. Students should give an oral presentation to their group, using each of the data bank categories as “talking points.” Group members then provide feedback, asking questions and gaining clarification on any piece of information that needs further explanation. Each base group is responsible for making sure that each of its members presents complete information in respect to each idea in each category. Students are informally assessed during their presentation by group members and the feedback is given. Students should record group suggestions on their data bank in another color ink. This helps the teacher see how seriously students used group input during this phase of the project. Feedback at this point will be critical later when students write. The presentation itself is critical for students as it helps solidify ideas learned. Students come to the group as the expert and demonstrate this as they present. Students can also be asked later to compare and contrast their expert topic with that of another in their group. See step 6 below.

### Step 4

Students return to their resources to add details, gather more information, and finish their data banks, as suggested by their group.

### Step 5

Students are ready to write! In its most simplistic form, students can create an outline for their research paper by first using the category headings as their outline

subheadings. Ideas within each category are then grouped together to become numbered items below the subheadings. See sample outline below.

### **Susan B. Anthony**

1. Life in her day
  - a. Born February 15, 1820 into a Quaker family
  - b. Women excluded from many jobs men held
  - c. Women did not have the right to vote
2. Her mission
  - a. Equal rights for women
  - b. Equal rights for slaves
  - c.
3. Her accomplishments
  - a. Worked to pass 19<sup>th</sup> amendment
  - b.
4. Her obstacles
  - a. Arrested for voting
  - b.

Students begin writing a research paper using each data bank category as a subheading in their report. Each idea or group of ideas under Susan B. Anthony's category "her accomplishments" then becomes a paragraph or more that explains the idea. At this point students should not need their reference material but should be able to write from their data bank, while recalling how they presented the information to their group. The group presentations described in Step 3 really help students solidify the information in their heads so that they can write at this point. The final research paper should reflect the categories established by the base group, as well as the ideas noted under each category.

### Step 6

This type of research lends itself naturally to students taking their knowledge to the next level. They can then compare and contrast their topic, in this case Susan B. Anthony, to another person's topic, another famous historical woman such as Sojourner Truth, in their base group. While studying one famous historical woman, students can begin to see how each can be connected in missions and accomplishments. Students can then write pieces that compare and contrast (paired writing is a great way to accomplish this) two of the women or can be assigned a project in which the entire group has to synthesize of all of the information learned in the group. The synthesis project is designed by the students themselves and can be in the form of a chart, a Venn diagram a web or other creative design that represents the information in a synthesized fashion.

### Conclusion

The Ohio academic content standards for social studies lend themselves to reading nonfiction using multiple sources and writing research from these sources. However, this can be a tricky endeavor for middle school students. They have to be supported along the way as they learn how to determine what information will be important, how to convey that information to one another and finally write that

information in a synthesis that demonstrates their learning. The process described above helps students gain a deep understanding of their topic, helps them analyze their topic in relation to other important topics and at the same time scaffolds their learning in reading and writing nonfiction. As we try to foster inquiry within our middle schoolers, we must remember that: “Middle school is a time for exploration, for venturing into different worlds, for learning about a myriad of subjects, and for establishing patterns of lifelong inquiry. These beginning can’t be established through fiction alone; they require nonfiction to add substance and texture to that journey” (Beers & Samuels, p. 329).

Note: This project was originally presented by Theresa Tribbe and Kim Davis at the Ohio Writing Project, Summer, 2003.

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## Nickel and Dimed: Using a Topical Theme to Create Opportunities for Students to Make Connections Between Social Studies and Mathematics

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Shelly Sheats Harkness and Amy Poston

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**M**athematics education, as carried out in most classrooms, often appears to be long way from contributing to students' sense-making about democratic policies. Many students do not see connections between school mathematics and the mathematics of everyday life and they leave mathematics classes with the notion that learning mathematics only serves the purpose of knowing mathematics. The belief that mathematics is a body of truth independent of society is deeply embedded in education research (Martin, 1997).

Even though mathematics is rooted in social contexts, it is not often presented to students within real-life problems. Mathematics is not just about manipulating numbers and symbols to arrive at the one correct answer but, more importantly, it is about finding solutions and making decisions about real-life problems. It is a way of thinking about and organizing the world around us. Students should possess personal, technological, and thinking skills to apply mathematics meaningfully because: "These are the prerequisites for understanding the world in which we live, for realizing the potential of technology, and for maintaining our system of government" (National Council of Teachers of Mathematics, 1992, pp. 5-6). According to the National Council for the Social Studies (1994) teaching and learning are powerful when they engage students in activities that are meaningful, *integrative*, value-based, challenging, and active. Powerful mathematics teaching and learning should also engage students in the same ways. With these notions in mind, we planned and implemented the interdisciplinary project described in this article.

### Integrating Social Studies and Mathematics

This article describes how we integrated mathematics and social studies to create opportunities for students to use concepts from both disciplines along with the "Processes

Standard” for mathematics and “Skills and Methods” for social studies. The link between the two standards, as described in Ohio’s *Academic Content Standards (ACS)* documents for *K-12 Social Studies* (2003) and *K-12 Mathematics* (2002), is, indeed, very natural. The Social Studies Skills and Methods Standard is described as, “Students collect, organize, evaluate and synthesize information from multiple sources to draw logical conclusions. Students communicate this information using appropriate social studies terminology in oral, written or multimedia form and apply what they have learned to societal issues in simulated or real-world settings” (2004, p. 12). It links directly to the Mathematical Processes Standard described as, “Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas” (2003, p. 11).

The Summer Reading Program, described in this article, provided an opportunity for us to use the book, *Nickel and Dimed: On (Not) Getting By in America* (Ehrenreich, 2001), as the theme of a project for the freshmen enrolled in a mathematics course for preservice teachers (*ESMTH*). We wanted to model a project that integrated mathematics and social studies and we searched to find connections between *Nickel and Dimed* and the Social Studies Standards, Benchmarks, and Grade-Level Indicators for Grades 11 and 12.

Within a framework of mathematics, we anticipated that our students would collect, organize, and synthesize information from multiple sources to make conjectures and communicate findings related to political and economic decisions (*ACS: K-12 Social Studies*, Grade 11 - “. . .an in-depth study of the U.S. government and economy. . .to develop an understanding of the rights and responsibilities of citizenship, as well as personal economic responsibilities” (p.11). Although this paper describes a project used in a university course, we feel that both mathematics and social studies teachers could adapt it to address the Grade-Level Band for Grades 11-12, within the Economics Standard, Benchmark E: “Explain the use of a budget in making personal economic decisions and planning for the future” and specific Grade Eleven Grade-Level Indicators (*ACS: K-12 Social Studies*, p. 282).

#### *Nickel and Dimed* by Barbara Ehrenreich

Each summer, before classes officially begin, Miami University (MU) freshmen are required to read a book and prepare to discuss the reading with their classmates and faculty and staff who volunteer to lead the discussions. During the summer of 2003, the required reading was *Nickel and Dimed* by Barbara Ehrenreich. In *Nickel and Dimed*, Ehrenreich (2001) described her experience when she worked in what are typically considered unskilled and semi-skilled workplaces: “serving” [as a waitress] in Florida, “scrubbing” with Merry Maids in Maine, and “selling” at Wal-Mart. Ehrenreich went undercover in these places so that she could determine whether or not she could “get along” in the United States by earning an hourly wage of \$6-7 and working at least 40 hours per week. Ehrenreich gave the keynote address at the University Convocation for all students, faculty, staff, and the Oxford community.

#### Description of *ESMTH* and the Project

*ESMTH* was a 4-credit course designed so that students could experience an

adult perspective of the mathematics typically taught in the elementary school curriculum using a social constructivist framework (Vygotsky, 1978). One goal of the course was that students would understand mathematics in a connected, meaningful way rather than as a set of prescribed rules to be followed without understanding. They explored the nature of mathematics, what it means to “do” mathematics, and their own attitudes toward and beliefs about mathematics. During each class session of *ESMTH*, students typically solved problems in groups first and, then, as a class, we worked together, making sense of the mathematics. In the spirit of collaboration, we expected students to listen to each other, assess the merit of each other’s ideas, push each other to think more deeply, contribute to the conversation, and share ownership of mistakes and successes. We wanted them to be empowered.

According to Shor (1992), a thematic approach for an empowering process is the “topical theme”. The topical theme is a social question of key importance locally, nationally, or globally that is not generated from the students’ questions or curiosities but a theme that is raised by the teacher. The topical theme, “invites students to make contact with issues kept in the shadows or excluded from their attention, especially in regard to unequal power relations in society, so that they can decide whether to think about and act upon them” (Shor, 1992, p. 57). *Nickel and Dimed* provided just such a topical theme for our students to explore as a project in *ESMTH*. Frankenstein and Powell (1991) also discuss student-based ideas in critical math: “We are not suggesting that the curriculum should be composed solely of those ideas [student ideas]... Teachers can suggest new themes, ones they judge important... We also suggest themes that may not occur to students” (p. 48). Similar to the use of a topical theme, Frankenstein and Powell (1991) engaged their students in research about how they used mathematics in their daily lives but the students also examined topics about social inequality that they, Frankenstein and Powell, chose.

After a very brief discussion of the book, we presented the questions that they would explore for the project. We assigned students to groups of 3 or 4 and asked them to discuss the questions in their groups, and to generate a list of assumptions and budget items related to our hypothetical scenario and exploration. After this activity we introduced the guidelines and questions they were to answer for the project. We wanted students to collect, organize, evaluate, and synthesize information from multiple sources to draw logical conclusions (as in the Social Studies Skills and Methods Standard) related to these questions:

- Do not lose sight of the fact that we will be grading your mathematical ideas and thinking related to the questions below. We must know how your group arrived at the responses you write about; therefore, you must discuss the mathematics that you used and why.
  - You will work with your group and the paper you turn in must be typed, well written, clear, concise, and free of grammatical, spelling, or other errors. You can include mathematical work – any computation, charts, graphs you create – on separate sheets of paper but these must be labeled.
1. Ehrenreich found she could not survive on \$7.00 per hour wages. On page 220 she wrote, “I grew up hearing over and over, to the point of tedium, that “hard work” was the secret of success: ‘Work hard and you’ll get ahead’ or ‘It’s hard work that got us where we are.’ No one ever said that you could work hard – harder even than you ever thought possible – and still find

yourself sinking deeper into poverty and debt.” Consider how her experiment would have played out within a 30-mile radius of Oxford.

- (a) Create a hypothetical monthly budget (based on actual data that you collect and items in the Budget column) for living in the Oxford area.
  - (b) Based on the list of assumptions we created in class – for example, you must find a place that is hiring, you have a high school education, and so on – and the budget you created, could you live in Oxford without “sinking into poverty and debt?” Collect, organize, evaluate, and synthesize information from multiple sources to draw logical conclusions. Explore at least 3 different options regarding this question and include the data sources you used to support your conclusions.
  - (c) Assume you have the power to raise the minimum wage – \$5.15 – so that the “working poor” have enough money to meet their needs in the Oxford area. What should the new minimum wage be and *why*?
2. In the final chapter (Evaluation), Ehrenreich suggests some possible remedies for the conditions she experienced. How effective might these remedies be? What potential solutions would you add to Ehrenreich’s list or delete (as not feasible) from her list? Again, relate this to mathematical ideas or notions.
  3. For some people, education provides an escape from poverty. Assume you are a single parent with a minimum wage job. You want to start a college savings account for your child and *hope* to get raises each year (assume those will be 10% annually).
    - (a) How much money do you think you will need to save in order to send your child to MU in the year 2020? Figure out what you think MU costs will be in 2020 and base your conjecture on mathematical ideas.
    - (b) Create a savings plan so your child can attend MU without scholarships or financial aid. Based on the above assumptions, how much should you contribute each year from 2004 until 2020 in order to have enough money saved to pay for your child’s education?

Taking into account what the small groups agreed upon, during the class discussion of the project, we negotiated the assumptions and budget (see below). Students made the case for \$500 in start-up money. They had two weeks to work on this project outside of regular class time.

Assumptions:

You live within a 30- mile radius of Oxford.

You have a high school education.

You live alone.

You have no children to support.

You work 40 hours per week.

You must use after-tax income so figure your take-home pay based on the hourly wage you earn and 40 hours per week.

You must find a business that is hiring people within the 30-mile radius.

You attend MU part-time (must pay for one 3-credit course each term: Fall, Spring,

and Summer) during hours you are not working.

Budget:

- Rent (describe the place you live)
- Car payment, insurance, repairs and/or maintenance, and gasoline
- Health insurance (what kind and what does it cover)
- Food
- Utilities (phone, gas, electricity, others?)
- Clothes, shoes, miscellaneous
- Tuition, books, other school expenses
- Assume you have \$500 as start-up money
- Other budget items you definitely need given your circumstances

### Project Results

As the student groups set off to complete their project concerning *Nickel and Dimed*, many groups created a fictional person whose occupation and economic conditions would be the focus of the task. After accessing data from sources such as the Internet, family members, and townspeople, students combined their prior knowledge, and each group devised a monthly budget that incorporated housing, groceries, tuition, and other costs in a spreadsheet, bar graph, or pie graph. Taking into consideration the monthly income of their fictional person, students multiplied the hourly wage by the assumed forty-hour week and then by approximately four weeks. In this way they calculated the pay received minus the amount taken in taxes and made sure that their proposed budget was less than their actual earnings.

Although the majority of the student groups discovered that it was possible to live on their budget, no group had their individual earn the designated minimum wage of \$5.15 per hour. Instead, by doing some research on local jobs, the students used pay scales that averaged about \$9.09 an hour, 173% of the “true” minimum wage. When the students recognized that they were “just getting by” with a wage that was nearly double the standard pay set by the federal government, they were astonished. As one group noticed, “This project gave us an inside scoop to see how much budgeting our parents or anyone has to go through in order to not become bankrupt.” Based on what they wrote, it seems that many of these undergraduates were beginning to realize that as they had come from a privileged background, they had never recognized how difficult it can be to achieve the “American Dream” when so many aspects of life are correlated within economic and social contexts.

The third section of the project focused on the projected costs of a college education and budgets required to send a child to MU in 2020. To determine the necessary amount of money, the students first had to make conjectures and predictions related to tuition costs for the years 2020 to 2024. Using data from tuition costs from the past ten years, the groups estimated the future cost by implementing a variety of mathematical models such as: plotting the data points as the ordered pair (year, tuition) and then taking a linear regression; determining the average percent increase every two years at MU; or, using a national trend of an approximately 5% annual increase in the cost of tuition. Each group calculated similar costs even though they used different models. After calculating an estimate for the four-year tuition from 2020 to 2024, the students developed a sixteen-year plan that allowed them to save enough money for a hypothetical

child to attend MU. They used their previous budget that now included 10% raises annually during this sixteen-year period of time. Some groups estimated a yearly percent to be set aside and increased it as time passed. Other groups found the cost for the four-year education and calculated the monthly cost by dividing the amount by 192 (number of months times number of years until 2020). For one group, the most efficient way to accumulate the capital was to place the savings into an interest bearing bank account. This question allowed students to recognize that if financial aid and grants are not taken into consideration, the cost of a college education can be quite demanding on one's economic situation. That is, the total monetary value needed to send a child to MU for four years was exceptionally more than a lower-income family could afford if no assistance from the government or school was given. Further, the students did note that many universities take into consideration a student's financial situation and for a student whose family survives on minimum wage, it would be more than likely that some scholarship or loan would be offered, making the financial ability for enrollment at MU less burdensome.

Overall, the students ascertained that living on the minimum wage would be difficult, if not impossible; yet as one group observed, "everyday it is done by a countless number of individuals." Every group agreed that the minimum wage needed to be increased by at least 45% but they also realized that there is a direct correlation between wages and product costs and services and, hence, the increase must be gradual to not disrupt the overall economic system in America. They further discussed the notion that, as Ehrenreich noted, a person's salary does have an effect on his or her psychological perspective if one believes that his or her worth is based upon a pay scale. These students talked about the notion that living in poverty is not necessarily a choice and that individual respect should not be based upon socioeconomic status.

### Conclusion

Through this project and *Nickel and Dimed* (Ehrenreich, 2001), we created a topical theme where students naturally saw the connections between mathematics and social studies. Our students worked collaboratively as they collected, organized, evaluated, and synthesized information to draw logical conclusions related to societal issues raised by Barbara Ehrenreich in *Nickel and Dimed*. The authors of Ohio's *Academic Content Standards: Grades K-12 Social Studies* note, "Effective social studies education necessitates an interdisciplinary approach because inquiry into any real-world matter related to citizenship is holistic and multidisciplinary in nature" (p. 297). Effective mathematics education also requires an interdisciplinary approach so that students come to realize that mathematics is not just about manipulating numbers and symbols to arrive at one correct answer, but, more importantly, it is about finding solutions and making decisions as informed and empowered citizens. As two students and one group reported:

"Doing the budget wasn't as easy as I thought it was going to be. I normally go for the parts of projects that involve numbers, but this time, I think I made an incorrect choice in thinking I'd have the easy way out."

"At first I was a little mad when I found out that I couldn't just solve some math problems and write out their explanations, but now I see why that wasn't the case. For one, I feel I did a lot better on this than any math test I've ever taken."

"We feel that this project has been a great experience toward learning to apply

mathematical concepts to everyday life and to think critically... This was a wonderful way for us to think about math in our society and also to exhibit the fact that it is nearly impossible to achieve the 'American Dream' while surviving on the minimum wage set by the United States.”

The applications of mathematics extend far beyond the scope of the school and connect in important ways to social studies standards. Mathematical empowerment serves vital roles in one's ability to problem solve and make conjectures about aspects as intense as poverty or as “easy” (refer to student quote above) as making a budget.

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## Impressionism Project: Integrating Psychology and Mathematics via Art

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Joseph Hutchinson

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**A**ccording to the Ohio Department of Education’s recently adopted *Academic Content Standards for Social Studies*:

Research shows that learning is enhanced when students make meaningful connections between new information that they are learning and their own experiences. Combining social studies instruction with the study of other disciplines such as art and literature helps to reinforce the learning within each discipline. It also helps the students to develop conceptual frameworks that lead to broader understandings (State Board of Education of Ohio, 2002, p. 2).

After spending seventeen years in the classroom, experience has proven this citation correct.

Our job as educators is to provide students with the tools and opportunities that enable them to excel in ways specified by the Ohio Department of Education. Students gain a more thorough understanding and retain far more information when material is studied which they believe is relevant, and when they “learn by doing.” This is especially true in social studies classes. Unfortunately, a fallacy persists that the opportunity to educate pupils in this fashion is not always readily available, nor an easy task to accomplish in a typical social studies classroom. It is time to debunk this myth. Even in diverse areas meaningful connections can be made, but only if educators are willing to pursue uncommon approaches to teaching and learning.

Traditionally, math and social studies are rare partners when it comes to educational practices. Yet, when looking at the Ohio Department of Education’s *Academic Content Standards for Mathematics*, one finds that:

Making connections...between mathematics and other disciplines is critical for student success in using mathematics effectively...Students in the classroom need opportunities to recognize and draw upon the connections between and among topics studied. Teachers can facilitate this process by engaging students

in multi-layered problem solving situations that cross disciplines and engage students' interests (State Board of Education of Ohio, 2001, p. 198).

Indeed, this excerpt fits remarkably well with the social studies extract, and for good reason.

There are many ways to “grab” student attention, maintain interest, and engage them in unique and challenging experiences. One strategy I have had success with involves the utilization of cross-curricular approaches. Since social studies encompass a diverse array of subject areas, myriad connections exist between this field and others. Discovering those connections is what makes learning exciting for students and teaching an exhilarating field for educators.

#### Problematic Situation

In my senior psychology class, I have always been impressed by how interested students are while studying a unit about sensation and perception. They seem particularly enthralled by how our minds can be “tricked” into seeing or believing certain things. To demonstrate this effect in concrete terms, I show movies such as *The Sixth Sense*, *The Others* or *The Ring*. These movies set viewers up and grab them at the end with “Aha!” moments, similar to techniques utilized in the old *Twilight Zone* television series. Using some (not all due to time constraints) of these visual examples prove to be effective tools in relating student experiences to perception and sensation. The “twist” at the ends of these movies succeeds in “fooling” viewers and students are genuinely intrigued by the fact that they were “duped.”

However, I desired them to go one step further, and challenged the class to refuse to accept the fact that this is a natural occurrence. I did not want them to lose this feeling of awe and then just let it slip away without further analysis. This had been the case so often in the past and I was dissatisfied as a result. Seizing upon this teachable moment, I became determined that my students would learn *why and how* this phenomenon occurs. In other words, have students examine different techniques used to achieve these effects, think about *how* they think, analyze *why* their brains and senses perceive the way they do; move beyond sensations, ascertain causes; delve deeply into the realm of perception as it applies to them. Through personal analysis, students could look more deeply into these concepts. In my opinion, the strategy of “learning by doing” would be the most conducive to accomplishing this task.

I decided to use another form of art to demonstrate how our brains perceive in relation to our senses. Examples used to demonstrate similar types of effects focused on the work of artist M.C. Escher. His artwork encompasses a wide variety of styles, many of which visually deceive viewers. In some sketches, Escher creates multiple illusions of endless staircases leading nowhere. The artist has also drawn a waterfall fed by a canal that is amazingly, when followed by the eye, on the same plane at the top and bottom of the fall. In others, he delves into tessellations, which appear to be able to go on and on ad infinitum. Woven throughout his work are interesting creatures, some that exist, others that do not. Yet each illusion works. (Incidentally, excellent M.C. Escher reproductions may be acquired in books and on numerous websites. There is no shortage of material available. Also, calendars, disassembled and laminated, enable teachers to pass reproductions around so students can more closely examine them.)

In the past, looking at and discussing these works of art in relation to relevant psychological principles was how I taught this unit. After the initial wonderment, how these deceptions were achieved was discussed in great detail. Frequently I would ask students to write about their perceptions of a drawing that appealed to them; then I would share Escher's original intentions in creating that piece of art. However, I was always dissatisfied with looking, discussing, writing *and forgetting*. I felt that there was a better way to engage student minds in this realm of sensation and perception, one they would not so easily forget.

### Uncommon Approach

M.C. Escher once commented:

By keenly confronting the enigmas that surround us, and by considering and analyzing the observations that I had made, I ended up in the domain of mathematics. Although I am absolutely innocent of training or knowledge in the exact sciences, I often seem to have more in common with mathematicians than with my fellow artists (Escher, 2001, p. 6).

In fact he was being quite modest. Many of Escher's creations were touted as masterpieces by mathematicians due to the high level of mathematical properties inherent to his varied and unique designs. From tessellations to Mobius strips to impossible structures, Escher effectively incorporated math into his designs in highly unusual ways.

Intrigued and acutely aware of the fact that mathematical concepts were integral to M.C. Escher's work, I wanted to convey these aspects to students in addition to psychological perspectives, yet felt uncomfortable doing so. That is when I tapped the expertise of a superb math teacher, Mr. Dale Price, who also has a fascination with M.C. Escher. Dale is a unique educator, being certified in history and having a Master's Degree in Mass Communication. He also is a published author, having co-written a high school journalism text.

Few can agree why they like the work of artists such as Picasso or Monet, so it is natural for Dale and I to be fascinated by Escher's work for different reasons; it is also a reasonable expectation for us to approach his work from the perspective of our academic disciplines. After discussing possibilities, we immediately recognized numerous connections and concluded that our students may be looking at Escher's artwork in different ways too. As a result, he and I devised a lesson plan, a joint effort between our areas of interest. Without a doubt, the resulting *Impressionism Project* enhanced our growth as much as our students. Incidentally, Impressionism, a term coined by Dale and I in the project's early developmental stages, refers to the practice of presenting and elaborating one's reactions to a work of art; it is *not* related to the art movement from the late nineteenth and early twentieth centuries.

### Preliminary Steps

Psychology is the scientific study of human behavior and mental processes, in other words, what people think, feel and do (Kasschau, 2003). Once this fact was reiterated in my class, I informed students that that was exactly what we were about to do.

First, the concepts of sensation and perception were defined. Sensation is an awareness or mental process due to stimulation of a sensory organ, what occurs when a stimulus activates a receptor (Kasschau, 2003). For instance, when sight is engaged in noticing a strange greenish tinge in the color of the sky. Perception deals with insight and our capacity for comprehension; the organization of sensory information into meaningful experiences (Kasschau, 2003). Recollections of a tornado that touched down the last time skies were of that strange green hue, for example. In this manner, a sensation (seeing the green sky) may be combined with past experiences (a tornado) and yield perceptions (Beware!). Sensation and perception are necessary to gathering and interpreting information in our environments. The interesting twist is that one or both can be fooled; how this occurs is what I desired my students to cogitate further.

Second, the subsequent mathematical terms were scrutinized in math class to clarify meaning for students. Tessellations have a checkered appearance and are similar to mosaics. Since mosaics extend over given areas without leaving any region uncovered, the geometric meaning of the word tessellate is to cover the plane with a pattern in such a way as to leave no region uncovered (Schwartzman, 1994). By extension, space or hyperspace may also be tessellated. A Mobius strip is a continuous one-sided surface representing infinity (Schwartzman, 1994). Impossible figures or structures can be drawn, but cannot be constructed. Other related mathematical terminologies were reviewed, thereby providing students with information about geometric designs, perspective, symmetry, reflection, congruency, infinity and other applicable principles.

Third, the following list of resources includes items useful to the introductory phase of this project.

- M.C. Escher: **The Graphic Work** (interpretive book by the artist)
- *M.C. Escher* (book by Sandra Forty)
- *The Fantastic World Of M.C. Escher* (video about his work and life)
- <http://www.mcescher.com/> (official Escher website/many are devoted to his art)

Through resources such as these, Escher's techniques were studied in relation to each subject area. Educators can supplement these resources as needed. This however was just the preliminary phase; the real learning experience was about to begin. Next, an explanatory task form similar to the one students received is depicted.

#### A "Hands-on Minds-on" Project

"Anything which can be called a study, whether arithmetic, history, geography, or one of the natural sciences, must be derived from materials which at the outset fall within the scope of ordinary life experience" (Dewey, 1938, p. 73). The *Impressionism Project* was originally intended to demonstrate relationships between mathematics and psychology through the medium of visual arts. In reality, many subject areas and personal student experiences are, in one way or another, incorporated into the successful implementation of this project. The possibilities are as endless as the ideas included in each artistic expression created. Results are guaranteed to be unique, fresh and "different."

However, finished designs were expected to have a strong emphasis on mathematical principles and psychological concepts. Artistic ability was *not* to be judged; only the application of concepts and principles in relation

to the artwork was assessed. Two sets of challenges were provided to students, who were given approximately two weeks to complete each list of instructions. Of course, time is a negotiable precious commodity and educators can decide just how much in-class time they are willing to commit to this worthwhile endeavor. As is often the case, a great deal of work can be completed outside of the classroom. The first challenge was a list comprised of styles students could emulate:

Draft, by hand, using a Mira or computer software, a tessellation/tiling.

Incorporate a Mobius strip (representing infinity) into a drawing.

Create an “impossible figure,” an optical illusion that can exist only on paper.

Draw a Stripe Image.

Create a surrealistic picture: focus on “dualisms”/double images.

Draw an “upside-down” image: two distinct images depending on which way picture is viewed.

Make a working kaleidoscope.

Create a “combination effect” of your choosing.

Students were not limited to one drawing, but quality was sincerely emphasized. Thus, one artistic work per pupil was the norm. Challenge two required students to perform a self-analysis, really think about how and why they had designed their creations. They were required to explain the following:

- Where their idea had come from; how they had been influenced.
- Literally, how the piece was created.
- The illusion/effect produced and how it was successfully achieved.
- How positive and negative space contributed to the overall effect.
- Can the artwork be constructed? The illusion made? (Try it!)
- Discoveries made as the design was being created.
- Problems encountered and solved as the creation evolved.
- Mathematically, identify ideas inherent to the designs created and relate the role those ideas played as the piece was created.
- Psychologically, how the artistic creation works; how it can be explained through psychological concepts and/or philosophies.

During the second challenge, students were engaged in a process of self-analysis, conscious at all times of how and why each decision about their artwork was made. This is a definite contrast to simply viewing someone else’s artwork, discussing and making assumptions about the artist’s intent and style and then moving on to the next piece. In this phase, students have become the artists, the experts who can provide answers to any questions asked. As a result, pupil interest levels remain high as curricular connections are firmly established between the “unusual” areas of art, math and psychology. Throughout the whole affair critical thinking skills are enhanced as they are utilized and analyzed in a simultaneous fashion. This reflective section is what makes the Impressionism Project special and provides a portion educators outside the field of art can fairly assess.

### Learning Objectives

In order to accomplish the task of engaging students in unique thinking and interpretation processes, the following learning objectives were established as goals.

- An appreciation is fostered amongst students for the myriad ways psychology and mathematics can enrich their lives through artwork.
- Through observation, analysis and evaluation, students gain a better understanding of relationships between these areas of study, with the intent that further application and connections will result as similar situations are encountered later. Students are encouraged to “think outside the box,” as they discover and/or enhance cognitive and hands-on skills.
- The inherent beauty associated with mathematical principles, abstract as well as concrete in nature, is revealed. Math is seen through new eyes as stereotypical notions about the subject are dispelled.
- Through self-analysis, students organize sensations and *perception into* meaningful experiences; pupils realize how these human qualities work together in helping them interpret and understand reality.

### Lessons Learned

Only minor problems were encountered as the project unfolded. First, fears had to be quelled as remarks like, “I’m not an artist,” “I can’t draw” and “I don’t know where to begin” greeted the introductory phase. Some students were apprehensive about doing math in psychology class and vice-versa. However, as every educator knows, these kinds of reactions are common when students hear the phrase “cross-curricular project.” In a turn-about move, I utilized this teachable moment as the basis for a great discussion about perceptions and the influence they can have, for better or worse, in our lives. Negativity disappeared. More importantly, a foundation for the Impressionism Project had been effectively established in a collaborative fashion.

One problem that caused more urgent concern for Dale and I was related to the second challenge. Some of the self-analysis explanations were not balanced between the areas of math and psychology. In other words, a number of the written reflective pieces focused too heavily on one subject and slighted the other. This unexpected problem led to assessment difficulties and made it hard to judge each project in a consistent manner. To avoid this drawback in the future, more specific expectations will be provided initially as the framework of the project is clarified. Also, since the Impressionism Project has already been implemented, former student examples will be shared to ensure better understanding amongst later participants.

### The Ultimate Assessment Tool

As was mentioned earlier, artistic ability was not evaluated. Assessment involved an in-depth look at how students justified the integration of their artwork to the psychological principles of sensation and perception in conjunction with the successful use of mathematical principles. Art was the vehicle used to arrive at this destination. Owing to the fact that assessment is an important topic of concern for educators, student comments about their overall experiences are included. I regard student feedback as the

ultimate assessment tool. With their permission, student responses to the *Impressionism Project* follow:

“We were given so much freedom to express ourselves, I found myself working on this project at home for hours. My idea came from M.C. Escher’s drawing *Waterfall*. I took the idea of impossible figures and expanded on it by making a system of more complex waterways. Escher inspired my drawing, so it has a similar philosophical idea. I wanted to use what people see as normal objects, but then twist them by turning them into an impossible figure. This causes viewers to take more than just one look and to leave them wondering what it would be like to be there and what the structure could be used for. Also, viewers are intrigued and surprised when they realize that they can never be in a similar place.”

- Mark Domschot

“This project helped me explore artistic talents that I never knew were there.”

- LaJuanda McIntyre

“It wasn’t until I tried to think about how I think that I actually discovered how hard of a job this project was going to be. This is called an *Impressionism Project*, but in reality human nature as a whole is one big *Impressionism Project*! The influence for my drawing came from my life; all of my life, everything that has ever happened to me plays a role in what this project is.” - Shannon Gladioux

“Creating my own representation of a three-dimensional image on a two-dimensional surface was hard work, but a fascinating and fulfilling experience.”

- James Houghtell

“The senior *Impressionism Project* gave me many creative ideas. These ideas were non-stop; they kept on coming and expanded into other ideas. During the project I could not stop thinking about it at all. Now I’m looking forward to working on many other artistic ideas on my own time.” - Steven Barker

“I loved discovering the relationship between psychology, math and art.”

- Jennifer Kusz

“My drawing is an image of how I think. Our psychology and math *Impressionism Project* opened the window to my imagination and talent. I was able to express myself on my own creative level. I never knew the height of my imagination and creativity until participating in this art project.” - John Mattoni

“As I began to draw I saw nothing at first, but as my work progressed I began to relate the project to myself. It symbolizes all that my life is centered around. The mathematical ideas in my design mainly focus around geometric figures. There are squares and triangles that help to make odd shapes and cause a person’s eyes to wander around the piece rather than remain in one small focused area. They also encourage people to rotate the drawing and try to see as many figures as possible. The effect of this drawing is to force people to truly think about what it could be without being told what it is. My creation works by drawing people’s eyes across the paper moving from positive to

negative space. This encourages the viewer to see different designs as their eyes pass from one form and back to it. This is true for both perception and sensation because what the person sees definitely gives them a sensation.” - Sarah Troutman

“This senior *Impressionism Project* allowed me to better understand math, psychology and ultimately myself.” - Josh Rutt

#### Discovering Wonder

Based on positive responses such as those cited above, I have come to the conclusion that the *Impressionism Project* is a keeper. For two weeks students were immersed in an atmosphere of discovery, became intimately acquainted with an ideology perhaps never contemplated before. Any time pupils are moved to this degree of introspection and demonstrate such a firm understanding of higher order thinking skills utilized, I believe that the results are a genuine reflection of efforts made to complete required tasks.

By taking the next step and allowing them to design their own artistic creations, my students were able to experience art in a unique way; a fact made possible by the rare marriage of psychology and mathematics. Pupils saw the connections they were literally “making” as they fashioned their own works of art, and then justified these artistic creations in psychological and mathematical terminology.

Once they became the artists, students were transformed from the domain of passive viewers to that of active participants in the learning *and teaching* process. To some extent, novices became experts sharing what and how they learned as they learned, consequently educating those around them. For these reasons, I am certain students will remember this experience because it held meaning for each participant on an individual level, yet benefited everyone involved.

In regards to his artistic creations, M.C. Escher once said, “The ideas that are basic to them often bear witness to my amazement and wonder at the laws of nature which operate in the world around us. He who wonders discovers that this is in itself a wonder” (Escher, 2001, p. 6). In relation to the *Impressionism Project*, all participants seemed to enjoy each phase of the activity, even those with preconceived notions about art, math or psychology. Educators as well as students profited from this unique experience that truly was filled with the discovery of wonder.

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# Teaching History, Geography, and the Cultural Importance of Minerals

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Lars J. Helgeson

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Middle schools incorporate team teaching as a means to promote the integration of curriculum to help students find relevance and to make connections among different subjects. Since earth science and history are typically taught in the middle school it is helpful for both the science and history teacher to find a way to provide some commonality. The study of cultures, countries, and history has a place in both social studies and science. A new field of study, Cultural Geology, lends itself to establishing this commonality and is the basis for developing the concepts in this paper. Cultural Geology is defined as: “The study of the relationship between human ways of life, including religion, tradition, and products, and Earth’s history, processes, structures, and materials” (Mitchell, 2004, p. 1).

How different cultures use rocks and minerals and how geology has influenced world history is mentioned in some geology texts (Wicander & Monroe, 2002). Topography has been important in battles and war (Johnson, 1981), in the setting of cities (Eschman & Marcus, 1981), and frequently minerals, especially silver and gold, have changed the course of history (Ridge, 1981). It is encouraging that one author recognizes the value of culture, and stating “Gemstones are even more desirable when some kind of lore is associated with them” (Wicander & Monroe, 2002, p. 55). However, most texts typically give minimal discussion about the value, use, and beliefs related to certain gems and minerals, and few references are available to the classroom teacher to expand on the myths. While it is not common to find cultural use of rocks and minerals as an integral part of instruction in Geology or Earth Science, the author has found that reference to beliefs about various stones, minerals, and gems is of great interest to his pre-service teachers and this approach provides a way to make mineral identification and classification relevant to students. One of the best, inexpensive references that are useful in Social Studies and Earth Science is the Smithsonian Handbook *Gemstones* (Hall, 2002), which provides identification criteria, maps, and some interesting myths about gems. The history and myths of gems and minerals is very interesting and establishes a connection between Social Studies and Science and is in harmony with the Ohio Social Studies Content Standards (Ohio Department of Education, 2002) and the Ohio Science

Content Standards (Ohio Department of Education, 2002). The study of minerals from a cultural perspective helps students to understand that humans are an integral part of the Earth's system and that the choices humans make today do indeed impact the natural systems in the future. Furthermore, the historical foundations of scientific theories and ideas aid in the understanding of emerging issues in the sciences. Scientific thinking is recognized as *not* the usual manner by which students learn geology and it is important to pay attention to student thought processes in the presentation of materials. In reference to students' thought processes one geologist says, "They are interested and stimulated only when they understand the context and implications of the material they are learning" (Perkins, 2002, p. xi).

When introducing the topic of the properties of minerals, such as hardness, the author asks his students if they know their birthstone (Table 2), which most of them do. But, they do not know why that is the stone for that particular month, nor do they know the historical significance of the gem, and they rarely know where the gems and minerals are found in the world. They do not know the interesting history of the uses of gems and minerals in health, psychology, trade, culture, and art. And this is the point at which history and earth science connect. Many students have stone, mineral, or semi-precious beads and earrings, and across the country, bead stores are frequented by teenagers to obtain materials to make necklaces, bracelets, and other kinds of jewelry. Recently *Popular Mechanics* magazine carried an article about beads found in the Blombos Cave of South Africa. Those beads, thought to be 70,000 years old, represent the oldest known personal ornaments (Popular Mechanics, 2004).

The word bead comes from the Anglo Saxon word *bede*, meaning prayer. Rosaries, associated with the rose garden in Persia, supposedly originated in India and spread to China, Japan, and Tibet, and are used in nearly every religion to count prayers (Seyd, 1973). When introducing students to the physical characteristics of various minerals the author talks about beads made from natural materials and show some beads and minerals he has collected that come from different parts of the world. The author introduces a map of the world to show where various minerals, gems and beads come from, and then address in detail the history of rocks and minerals in various cultures. In our own country the bead trade comprises an important facet of expansion into the Indian territories and subsequent settlement starting with glass beads that were first introduced by Christopher Columbus in 1492 (Dubin, 1998). In addition, there is an ancient tradition of Native American rock art, pictography, that is both linguistically communicative and shamanic (Keyser & Klassen, 2001). In a broader perspective ancient Rock Art is found in Australia, Norway, South Africa, Italy, Sweden, and France (Chippendale, 2001).

There is an ancient tradition linking the signs of the zodiac, the planets, with colors and gemstones. About 700 B.C.E. astronomer/astrologers began to use the signs of the zodiac in their calculations and predictions, and Babylonians established the 12 divisions of the zodiac about 550 B.C.E. (Tester, 1987). Ancient Egyptian, Greek, Christian, Arab, and Jewish scholars developed and adopted the zodiac and related planets, supernatural beings, and attached gemstones to the various constellations (Table 1). Tester states:

It was the philosophers, like Plato, who prepared the ground, and the Stoics, who were among the greatest logicians and physicists of their times - who most fully worked it into their system. It was the doctors and the scientists like

Theophrastus who accepted it and developed its associations with medicine and plants and stones, and with the science of alchemy, which was then nearer to chemical technology than to the magical search for the philosophers' stone it much later became (Tester, 1987, p. 17).

Special stones are associated with Israel's twelve tribes and the stones have become interwoven with the twelve signs of the zodiac (Kunz, 1913). This became linked with the twelve months of the calendar year, and thus with birthstones. In addition, minerals were assigned to the twelve Apostles, and to the twelve regions of the human body (Table 1). In the Martin Scorsese film, *The Last Temptation of Christ*, in a temple scene depicting Jesus' anger at the moneychangers, the high priest wears a breastplate with sacred stones. The stones on the high priest's breastplate are named in the Old Testament (Exodus 28: 15-21) as: 1. sardius (sard, sardonyx, or carnelian) and carved with the tribal name Reuben; 2. topaz (could be peridot or chrysolite) carved with the name Simeon; 3. carbuncle (almandine garnet) carved with the name Levi; 4. emerald (could be green feldspar as that was used in Egyptian breastplates that preceded that of the Israelites) carved with the name Judah; 5. sapphire (probably lapis lazuli, a blue stone that was also used by the Egyptians for religious purposes) carved with name Issachar; 6. diamond (probably sardonyx) and carved with the name Zebulun; 7. jacinth (possibly brown agate or amber) carved with the name of the tribe of Joseph; 8. agate (banded agate) carved with the name of the tribe of Benjamin; 9. amethyst, carved with the name of the tribe of Dan; 10. beryl (possibly yellow jasper or chalcedony) carved with the name of the tribe of Naphtali; 11. onyx (possibly beryl or malachite) carved with the name Gad; and in the 12<sup>th</sup> position, jasper (green jasper, nephrite, jadeite or jade, sometimes listed as the sixth stone) carved with the tribal name of Assher (Kunz, 1913). The history of the stones, their names, in conjunction with the availability of different minerals, are mentioned or defined in different translations and versions of the Biblical writings from 250 B.C.E. to the present day. All this is engrossing reading, and with a little effort students can find and read the translations of different versions of these important historical documents. Even in modern times various minerals are attributed with specific spiritual or healing powers (Gienger, 2003; Melody, 1992; Burka, 1985; Lilly, 2001) that students can find fascinating to read. Due to the wide acceptance and notoriety of the Gaia hypothesis, that the entire earth is alive, a total planetary being (Lovelock, 1988), we are encouraged to look at the interaction of people and the Earth in a different, holistic manner. Lovelock writes, "...I deny the notion that systems are never more than the sum of their parts. The value of Gaia in this debate is that it is the largest of living systems. It can be analyzed both as a whole system and, in the reductionist manner, as a collection of parts" (Lovelock, 1988, p. 215). This view has influenced how the author approaches Earth Science and adds an interesting dimension to the historical, cultural, and geographic aspects of using gems and minerals.

When the author asks his students why jewelers have identified the various gems as birthstones, the students usually cite cost as the primary factor, so that the jewelry stores would make a bigger profit if the pricey gems were listed instead of inexpensive stones or semiprecious gems. Students also suggest that the beauty, availability, durability of the minerals, and traditional or historical beliefs associated with the gems is important too.

In order to study the minerals scientifically students investigate a variety of characteristics, such as, density, color, fracture, cleavage, luster and hardness. Hardness

is an excellent topic because there are ten specific minerals used for classification. In 1812 Friedrich Mohs devised a relative hardness scale (Perkins, 2002). The measurement of hardness is one of the laboratory activities commonly taught in geology in middle school and high school Earth Science. Schools usually have hardness kits that contain all the minerals in the Mohs scale except diamond. Teachers and even students often have a diamond of their own to demonstrate the level 10 hardness. By including the cultural and geographic component in the study of hardness and other properties students find a more personal and engaging value in the minerals, in addition to the physical characteristics. In Table 1 the geographical regions associated with the minerals are underlined, and some of the associated mythological or cultural beliefs are italicized.

By adding the ancient, cultural, and mythological properties to the chart students read everything with interest and seek out more information. The information included in Table 1 is abbreviated here, but is considerably expanded in our classroom discussions. Of course, the author must assure his students that while the mythical and ancient medical uses are historically interesting they are not, overall, supported by modern science. There are literally hundreds of websites devoted to beads, gems, and minerals where students can obtain information and acquire their own specimens. The modern magical story of Harry Potter and the Sorcerer's Stone is based on the legends related to the historical and mythical Philosophers Stone. Nicolas Flamel, who was born circa 1330, plays a significant role in the Potter books. Flamel was a real figure in history, and one who did indeed seek the ability to turn base metals into gold and silver, and claimed to have succeeded with his philosophers' stone (Highfield, 2002).

The purpose of this article was to illustrate how social studies and science can enhance each other. By demonstrating the cultural aspects of science, its meaning is enriched. Conversely, historical and geographic knowledge is promoted by understanding its scientific influence. Discussions about the meaning and value of such systems are very fruitful and occasionally quite heated. In terms of critical thinking I suppose that the question we should be asking at this point is about beliefs. Why are unsubstantiated beliefs so persistent in all human cultures?

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## Meeting the Challenge: Connecting Early Childhood Education to Social Studies Standards

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**Barbara Rucker and Kay E. Benjamin**

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As state and local school systems stress content standards, the required academic rigors for this support bring about a shift away from the traditional approaches of delivering instruction. In this era of content standards driven education, the push down curriculum (Magnuson, 2002), and standards-based testing, early childhood professionals find that they too must consider the implications of this movement on their curricula.

Many early childhood educators feel that they can no longer be creative and spontaneous; instead, classroom lessons and instructions must now have standards as a basis. Further, these educators are concerned that play, which is essential to the curriculum, will no longer occupy a prominent role in the planning of instruction. The early childhood teacher is now confronted with the “dilemma” of trying to insure congruence between standards driven content and developmentally appropriate practices (Sheehan & Wheatley, 2001). This article addresses the challenge of providing developmentally appropriate practices to facilitate learning content. Using social studies content standards, the authors provide ways to incorporate developmentally appropriate practices within a thematic unit plan. Incorporating the recommendations of Sheehan & Wheatley (2001), Brewer (2001), National Council of Social Studies, and the National Association of Education for Young Children, our intent is to show that planning for instruction in early childhood settings does not have to present itself as a challenge.

The purpose of instituting educational standards into the schools is to address what national political leaders see as mediocre academic achievement (National Urban League, 2001). This concern, however, is not unique to today’s world. Jones (n.d.) reports that as early as 1894, a group of scholars who identified themselves as the Committee of Ten, developed a report that “forcefully called for an established academic curriculum for all high school students” (p. 1).

During the 20<sup>th</sup> century, many initiatives to strengthen academic standards for American children (for example Outcome Based Education) were developed,

implemented, and often discarded. In looking at a few of the catalysts that precipitated the initiatives, it is readily apparent that America spent the century looking for the “magical” program to keep it superior to or competitive with other world powers. From its reaction to the United Soviet Socialist Republic’s (U.S.S.R.) Sputnik in the 1950’s, the 1983 *A Nation at Risk* report, and Goals 2000 for example, America has decried the lack of strong standards for its young people. And now its déjà vu at the beginning of the 21<sup>st</sup> century, as educational systems find themselves under the mantle of the No Child Left Behind Act of 2001.

While there is an abundance of literature addressing the need for more rigorous standards for middle and secondary students, very little of it looks at content standards for children ages 3 through 8, the early childhood preschool and primary years (Wheatley, 2003). The majority of what has been written looks at the content areas with very little mention of the role of standards when the emphasis is on early childhood education. Changes are occurring, however, as most states have begun to write academic content standards that address the preschool years through grade 12 (Ohio Department of Education, 2004). This is a critical step in the standards movement because it demonstrates recognition of the role of early childhood education in establishing the foundation for future academic success.

### Early Childhood Education

Most early childhood programs are child centered, have a play-based curriculum and emphasize learning in the developmental domains: aesthetics, affective, cognitive, social, language, and physical (Kostelnik, Soderman, & Whiren, 2004). These programs follow the National Association of Education for Young Children’s (NAEYC) principles of developmentally appropriate practice (DAP), which are based upon the age, individuality, and social and cultural context of each child in the early childhood setting (Bredekamp & Copple, 1997). Effective early childhood programs provide developmentally appropriate curriculum, meaningful activities, print rich environments, and extensive opportunities for young children to learn through first hand experiences.

### Early Childhood Education and Content Standards

In the article *A Professional Dilemma: Content Coverage vs. Developmentally Appropriate Practice* Sheehan and Wheatley (2001) describe a quandary in which early childhood professionals, especially preservice teachers, now find themselves. For these teachers this quandary speaks to “how to address the content reflected in the proficiency tests, while also making that content meaningful to students, and making it developmentally appropriate” (p. 31). Since children are first introduced to the content areas in the early grades, how teachers address these areas is crucial because they are the persons who build the foundation for later understanding and academic success (Hyson, 2003). To overcome this dilemma Sheehan and Wheatley (2001) propose the following five recommendations for incorporating developmentally appropriate content into the early childhood curriculum:

- (1) relating to children’s experiences, (2) including children’s voices, (3) interesting content, (4) improving the curriculum, and (5) standardized testing.

First, in relating to children's experiences the recommendations are that the concepts be meaningful and important to the lives of the children. Second, they recommend that children be given the opportunity "to voice their thoughts and feelings about the topic" (p. 31). Third, the content can be made interesting by using vocabulary with which children are familiar. Fourth, it is recommended that teachers give feedback to writers of curriculum, state standards, and standardize tests. Fifth, teachers are cautioned to try to avoid the trap of "teaching to the test" (p. 32).

#### Early Childhood Education and the Social Studies Content Standards

Social studies content standards were selected as the primary focus of this study because young children experience basic social studies content and concepts everyday in the natural environment of an early childhood program. The National Council of Social Studies' (NCSS) definition of social studies as helping children to "develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world" (Stockard, 2003, p. xi) may be readily observed at any time in a typical early childhood classroom. This classroom represents the democratic process found in the larger areas of American society. As young children make decisions, consider the rights of the individual with that of the group, work with others, show empathy, and respect the rights of others, they are imitating what is expected to take place in the adult world.

The many content areas comprising the social studies discipline can make this a difficult subject area to teach to young children. Brewer (2001) cites NAEYC's position for social studies: "Achieving DAP in social studies instruction where topics are fairly abstract, may seem more complicated than in math or science instruction, where real things can be manipulated and observed. Teachers of young children will be especially challenged in planning appropriate social studies activities" (p. 428).

At this period in their lives, young children are eager to learn and they need only to be introduced to concepts in a manner that considers their age, their individual interests, and their social and cultural contexts. In deciding what is developmentally appropriate, Brewer (2001) further cites NAEYC in suggesting that teachers should consider the following:

- Can children understand the concepts to be learned? If the concepts depend on being able to understand historical times or places far from children's experience, then children will not likely understand them.
- Are the concepts related to children's real-life experiences? Learning about a harbor may not be appropriate for children who live far inland.
- Can meaningful activities in which children are involved be planned around the concept? Field trips, resource people, and real objects to explore may bring concepts to life for young children; completing dittoed worksheets and coloring pages, however, will not promote concept development.
- Can the concept be integrated into other areas of the curriculum? For example, can the concept be developed through activities in which children sing songs, learn dances, read stories, and create art?
- Do the activities honor the diversity of the children and their families?
- Will stereotypes be reduced rather than increased through participation in

social studies activities? (Brewer, 2001, p. 428)

### Teaching Content Standards

NAEYC's Sub-Standard 4c requires early childhood teacher education candidates to "know the essential concepts, inquiry tools, and structure of content areas including academic subjects" (Hyson, 2003, p. 39). This might be frightening because, although early childhood professionals understand developmental domains and developmentally appropriate practices, the various disciplines comprising the social studies subject area can be intimidating. To develop effective lesson plans, early childhood teachers need to collaborate with social studies specialists, middle school teachers, writers of curriculum and standards, and local and state administrators (Sheehan & Wheatley, 2001). The middle school teacher can make recommendations and adopt early childhood strategies to insure continuity of methodology and learning styles. The social studies specialist can provide up-to-date information about trends and concepts for both the early childhood professional and the middle school teacher. Feedback can be shared with the writers of curriculum, social studies standards and standardized tests (Sheehan & Wheatley, 2001). Support from these persons will keep social studies from being so overwhelming.

### Developmentally Appropriate Practices to Facilitate Learning Content

The authors of this article incorporated the developmentally appropriate practices (DAP) recommendations of Sheehan and Wheatley (2001) in the development of an integrated thematic unit. The unit was designed to extend the concept of community through helping children understand the changes in their community over time, and to enhance their pride in the community. The authors took the role of instructors as they implemented the unit with a third grade class of African American students residing in a community situated in the outer ring of an urban district. Through discussions, KWL charts, hands on activities with compasses and digital cameras, concept mapping, read alouds, and a guided tour of the community, it was expected that the children would learn new information about the place where they reside and the entities that help to make their community a special place.

Most discussions took place during whole-group times. The instructors used questions to initiate most of the discussions. Many of the questions were designed to encourage the children to reconstruct previous experiences around the community, make predictions about the project, or generalize about information about the community. One of the objectives of the discussion activities was to review and introduce social studies specific vocabulary with particular emphasis upon geographical terms, such as cardinal directions and compass rose. Groups of two or three children were given a compass and guided by the instructor as they engaged in exploratory play. Discussion activities incorporating word sorts, concept mapping, read alouds, and KWL addressed the language domain, which has a prominent role in the early childhood curriculum.

The objective of using the digital camera was to capture sites in the community to use in the final project. The activity with the camera incorporated the physical domain as the children practiced using their small muscles to follow the directions of the

instructor for the best way to photograph people and sites. This hands-on activity was exciting because, for many of the children, this was their first opportunity to handle or manipulate a digital camera (see Figure 1 for additional sample unit activities).

The culminating activity was the creation of a class alphabet big book with community sites that were photographed by the children. The assessment was planned to ascertain if children could describe the sites that were photographed and to locate selected sites on a large map of their community. As the photos were selected and pasted into the big book, both instructors observed that the children were able to identify the sites they had photographed. The children also noisily and happily reflected upon the tour and the difficulty or ease they encountered in photographing the sites. When directed to locate specific sites on the community map, the children were able to find their school, selected businesses, and their homes with little difficulty.

The thematic unit plan incorporated Ohio Academic Standards from social studies, math, language arts, and a technology standard from the International Society for Technology in Education (ISTE). The social studies standards integrated into the unit were geography, history, government, economics and social studies skills and methods. The language arts standard was writing process. The technology standard was teaching, learning and the curriculum that promotes “technology-enhanced experiences that address content standards and student technology standards” (ISTE, 2000). The mathematics standard was measurement (see Figure 2 for representative samples of the DAP activities used to facilitate learning social studies content to fulfill the requirements of the standards).

At the end of the three week unit, the authors of this article concluded that four of the five DAP recommendations by Sheehan and Wheatley (2001) were fulfilled. Relating to Children’s Experiences was met through the selection of the children’s own community to extend the concept of a community. The sites and issues of their community were of importance to the children because they were able to view and discuss an entity in which they were submerged. Including Children’s Voices was met through developmental and cross-curricular activities provided by the instructors. These activities involved many whole class and group discussions and honored the children’s “thoughts and feelings” about various topics introduced during the unit. Interesting Content found the children (and their classroom teacher) revisiting places with which they were already familiar and discovering new places in the community. The chatter and excitement seemed to be underlined with pride as they rode by familiar sites during the field trip. Improving the Curriculum resulted in the classroom teacher discussing the new ideas she was able to attain through observing and working with the two authors. The teacher further shared that the new information she had acquired about the community would be incorporated into her teaching plans for the next school year. Standardized Testing was not addressed due to the project being carried out during the latter part of the school year.

### Conclusion

The multiple disciplines and abstract concepts inherent in social studies can present many challenges to teachers when planning for instruction in early childhood settings. This, however, need not be the case. Developmentally appropriate activities are the key for teaching content standards to young children. Children must be provided with opportunities to construct their own knowledge and engage in play and literacy activities.

Support from social studies specialists and others should result in early childhood teachers developing the understanding necessary to incorporate content standards into early childhood curriculum. Teaching social studies standards to young children will not be a challenge if the planned instruction and activities are developmentally appropriate, incorporate language with which children are familiar, provide opportunities for discussion and choice, and incorporate concepts that are meaningful and important to the lives of the children.

The authors of this article agree with Sheehan and Wheatley (2001) that early childhood teachers need the support and the opportunity to collaborate with others who are specialists in the field of social studies. Collaboration will help early childhood teachers identify those routine and daily activities that are the introductory elements of content standards. Academic content standards and concepts must be introduced in early childhood classrooms because it is at this point in a child's life when the foundation for later academic success is established. This type of recognition will strengthen the goals and purposes of the early childhood curriculum.

***Figure 1 – Sample Unit Activities***

**Objective**

The students will draw a compass rose on the political map of their community.

The students will locate their school and home on the political map of the community.

The students will acquire information about the history of the community.

The students will learn about the importance of the businesses in their community.

**Developmental and Cross Curricular Activities**

Physical Domain

The instructor guided the children in exploratory play with a compass.

Language Domain

Children learned geographical terms: cardinal directions, compass rose.

Aesthetic Domain – Art

The instructor modeled how to draw a compass rose on a map.

Children were then instructed to draw their own compass rose on an enlarged political map of their community.

Cognitive Domain

Children were guided in locating the approximate site of their homes and school on their individual map of the community.

Cognitive and Language Domains

A guided tour of the community on a bus that was a facsimile of an old trolley sparked discussions about the similarities and differences between the historical trolley and their modern school bus. The tour guide provided an oral history of the community.

Cognitive Domain

While on the tour, the guide directed the children's attention to the types of businesses that were particular to their community.

The students will become proficient in the use of digital cameras.

Physical and Cognitive Domain - Technology

The instructor modeled how to safely handle and use a digital camera.  
 The instructor provided hands-on small-muscle activities with the camera.  
 The instructor provided opportunities for children to critique sample photographs.

The students will create an alphabet big book of their community.

Cognitive Domain – Language Arts

The instructor shared alphabet books and facilitated a discussion about the components of such books.  
 The instructor guided the children in a discussion as to what from their neighborhood they could photograph that would fit a target letter (for example, A, B, C, etc.) in their class alphabet book.

*Figure 2 - Social Studies Content Chart*

<u>Standard</u>	<u>Benchmark</u>	<u>DAP for Unit</u>
Geography	<p>Use political maps, physical maps and aerial photographs to ask and answer questions about the local community.</p> <p>Use a compass rose and cardinal directions to describe the relative location of places.</p>	<p>Experiment with a compass in the classroom.</p> <p>Place cardinal direction signs in the classroom.</p> <p>Look at and discuss the state, city and ward maps.</p> <p>Draw a compass rose on a map of the ward.</p> <p>Locate and discuss significant sites on the ward map, for example, their school.</p> <p>Tour the ward in which their community is located.</p>
History	<p>Describe changes in the community over time.</p>	<p>Tour the community on a tour bus that is a facsimile of a trolley used in the city during the early 20<sup>th</sup> century.</p> <p>View changes at a renovated shopping center.</p> <p>Listen to oral history about changes and growth in the community.</p>

Economics	Explain how the local community is a market where buyers and sellers exchange goods and services. Identify examples of economic competition in the local community	Tour the community and photograph shops and businesses. Compare the large supermarkets to the smaller grocery stores.
Government	Identify the responsibilities of the branches of the U.S. government and explain why they are necessary.	Discuss structure of local government (mayor, council representative, ward) Identify location of council representative's office.
Social Skills and Methods	Obtaining information from a variety of sources.	Use of maps to locate streets and sites in the community. Tour of the community. Listen to oral history about the community.

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## Utilizing Primary and Secondary Sources on the Internet: A Critical Analysis of the Brown V. Board of Education Decision

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The United States Supreme Court has made a host of rulings that have had lasting effects on the American public educational system. Perhaps no other ruling has been more influential than the *Brown v. Board of Education Topeka, Kansas* decision. This is a lesson plan that can be used in an eighth/tenth grade classroom. Students, through the analysis of primary and secondary sources on the Internet, will discover the lasting influence the *Brown* decision has had on American public education and society. The lesson reflects the National Council for the Social Studies (NCSS) standards Number I Culture and Number II Time, Continuity, and Change, and Number VI Power, Authority, and Governance.

The eighth grade Ohio history academic content standard that pertains to this topic is as follows: “Attempts to protect the rights and enhance opportunities for the freedmen, including the basic provisions of the 13<sup>th</sup>, 14<sup>th</sup>, and 15<sup>th</sup> Amendments to the Constitution”. Also, the tenth grade Ohio content standard that pertains to this topic is as follows: “Analyze the origins, major developments, controversies and consequences of the civil rights movements with emphasis on (a) Brown v. Board of Education; (b) changes in goals and tactics of leading civil rights advocates and organizations; (c) the linkages between the civil rights movements and movements to gain justice for other minority groups.”

By rigorously analyzing primary and secondary sources on the select web sites, students will gain a greater understanding of the importance of *Brown v. Board of Education* decision in granting equal access to education for all Americans.

### Background Information

*Brown v. Board of Education of Topeka, Kansas* 1954 was a watershed judicial decision that granted equal access to education for all American children. In this specific case, Linda Brown’s parents filed suit with twelve other African-American families in

regards to their children attending a local neighborhood school. Brown happened to come first alphabetically, thus it is the lead name in the case. Linda Brown, a third grader, had to walk over a mile to a segregated school for Blacks, while an all-White school was only seven blocks away from where she lived.

Thurgood Marshall, a lawyer for the National Association for the Advancement of Colored People (NAACP) argued the case before the United States Supreme Court. Chief Justice Earl Warren, in a unanimous decision, concluded that separate facilities are inherently unequal. Children, like Linda Brown, were deprived of an equal opportunity for education based primarily on the color of their skin. This violated the due process clause under the Fourteenth Amendment. *Brown v. Board of Education* overturned the *Plessy v. Ferguson* decision. In 1896, the United States Supreme Court upheld the *Plessy v. Ferguson* decision that concluded there could be separate facilities for Whites and Blacks so long as they were equal.

After the *Brown v. Board of Education* decision, the United States Supreme Court also called on all school authorities to enact plans for desegregation. However, this decision did meet with resistance around the country. While the *Brown v. Board of Education* decision was made fifty years ago it has a lasting effect even today. Title IX and other legislation related to education such as PL 94-142 have their precedent in the *Brown* decision.

#### Lesson Plan (two 45-minute periods)

##### Instructional Objectives

At the conclusion of the lesson, eighth/tenth grade students will be able to:

- 1) Define and explain the significance of the following vocabulary terms: Fourteenth Amendment, *Brown v. Board of Education*, and discrimination.
- 2) Explain at least two lasting influences from the *Brown v. Board of Education* that still impact our society today.
- 3) Locate and critically analyze primary and secondary sources on the Internet.

##### Materials

Computers with Internet access

##### Concepts Taught

Analysis, synthesis, and evaluation

##### Procedures

##### Presenting the Scenario and the General Framework of the Lesson

- 1) During the first class session, the teacher will present to the class the following scenario: “What if you were not permitted to enter the local mall because you have blue eyes.” The teacher can substitute any other physical characteristic (such as height). Keep in mind that the overall point of the scenario is to discriminate against the students in the class based on a physical characteristic – something they have no control over.
- 2) The teacher will then ask the students the following questions: A) “How would you feel if other people are permitted to enter the mall and you are not?” B) “Is it fair that you are barred from the mall based on the color of your eyes?” C) “Should everyone have the equal opportunity to go to the mall?”
- 3) Building and extending upon the mall example, the teacher should then ask: “should all children have the right to go to public school?” Then, the teacher should relate that at one time in the United States, not all children had equal

access to public education. This policy of exclusion was an overt form of discrimination.

#### Providing a Brief Overview of *Brown v. Board of Education*

- 1) The teacher will provide a brief overview of the *Brown v. Board of Education* decision. Highlight the major points such as the reinterpretation of the Fourteenth Amendment and the decision that separate facilities are inherently unequal. List the key individuals of the *Brown* decision: Chief Justice Earl Warren, Thurgood Marshall, and Linda Brown.

#### Implementing the Activity

- 1) The teacher will instruct the students to conduct a search on the Internet about the *Brown v. Board of Education* decision. Before the students begin, the teacher will provide them with the general framework below for critically gathering and analyzing information on websites. In order to successfully evaluate the web sites, students must:
  - A) be able to distinguish between primary and secondary sources.
  - B) be able to evaluate the credibility of the site and accuracy of the information.
  - C) be able to identify the purpose and perspective of the web site.
  - D) be able to compare multiple sites for factual accuracy and diverse perspectives.
  - E) be able to systematically organize their researched information.
  - F) be able to present their research findings in a structured manner.

#### Rubric Option

- 1) The teacher will offer students the option of using the rubric at the NARA website. The United States National Archives and Records Administration (NARA) website provides a host of valuable evaluation forms/worksheets for primary resources. These worksheets can be used to evaluate written documents, photos, cartoons, posters, maps, artifacts, sound recordings, and motion pictures. These worksheets, can be downloaded at <http://www.archives.gov/digital-classroom/lessons/analysis-worksheets/document.html>

#### Conducting the Small Group Internet Search

- 1) The teacher will divide the students into groups of two to three and assign them to locate sites on the Internet related to *Brown v. Board of Education*. The list below includes suggested web sites with primary and secondary sources where students can begin their search. The teacher should also encourage the students to expand their search beyond the sites listed below.

#### Websites

<http://www.nps.gov/brvb/home.htm>  
<http://www.wmich.edu/politics/mlk/brown.html>  
<http://brownvboard.org/actvtybk/cover.htm>  
<http://www.digisys.net/users/hootie/brown/>  
<http://www.cjonline.com/stories/030501/kan-brownsuit.shtml>  
<http://www.geocities.com/CollegePark/Classroom/9912/brownvboard.html>  
<http://www.geocities.com/CollegePark/Theater/9022/brownvboard2.html>  
<http://www.cr.nps.gov/nr/travel/civilrights/players/htm>  
<http://door.library.uicu.edu/edx/brown.htm>

Conducting the Student Presentations

- 1) During the second-class session, the teacher will have the students describe, explain, and evaluate at least three (3) websites that they researched. The teacher will ask the students to structure the presentation based on the NARA rubric. The teacher will ask the following questions: what was the rationale for the *Brown* decision? What does the Fourteenth Amendment state all citizens of the United States possess? By not allowing children equal access to education, how does this form discrimination affect their future? The teacher should also ask the students to provide examples where we all receive equal protection under the law and where we do not.

Implementing the Evaluation Criteria

- 1) The teacher will conclude the lesson by summarizing the importance of the *Brown v. Board of Education* decision not only to education, but American society as well. The teacher will also assign the students to complete a journal entry or short writing assignment answering the following question: "What would the United States of America be like today if the Brown decision did not take place?"

## Teacher Websites

These sites are intended to provide the teacher with more detailed primary and secondary sources about the *Brown v. Board of Education* decision.

## Brown v. Board of Education

These sites provide the text of the *Brown v. Board of Education* decision. Pay particular attention to the reasons for *Plessy v. Ferguson* being overturned as well as the reinterpretation of the Fourteenth Amendment.

<http://coursesa.matrix.msu.edu/~hst306/documents/brown.html>

<http://www.watson.org/~lisa/blackhistory/early-civilrights/brown.html>

<http://www.nationalcenter.org/brown.html>

## Fourteenth Amendment

These sites provide the complete text for the Fourteenth Amendment. They also provide links to the Constitution as well as other amendments.

<http://www.law.cornell.edu/constitution/constitution.amendmentxiv.html>

<http://caselaw.lp.findlaw.com/data/constitution/amendment14/>

<http://memory.loc.gov/const/amend.html>

## Thurgood Marshall

The first site provides a biography of Thurgood Marshall. Most importantly, this site also features the speeches given by the late Supreme Court Justice. The second site is interesting in that it is the Federal Bureau of Investigation's (FBI) complete file on Thurgood Marshall.

<http://www.thurgoodmarshall.com>

<http://foia.fbi.gov/marshall.htm>

## Plessy v. Ferguson

These sites provide the text for the Plessy v. Ferguson decision. The third site also has a host of ideas for teaching extensions.

<http://www.watson.org/~lisa/blackhistory/post-civilwar/plessy.html>

<http://caselaw.lp.findlaw.com/scripts/getcase.pl?court=US&vol=163&invol=537>

<http://landmarkcases.org/plessy/home.html>

#### Earl Warren

All of the Brown websites have Chief Justice Earl Warren's opinion on them.

These sites are essentially biographical in nature.

<http://www.arlingtoncemetery.net/ewarren.htm>

<http://www.michaelariens.com/ConLaw/justices/warren.htm>

#### Linda Brown (Thompson)

These websites are secondary sources. They show that Linda Brown Thompson was still fighting the issue of school segregation as recently as 1979.

<http://www.pbs.org/kcet/publicschool/innovator/brown.html>

<http://www.nd.edu/~barger/www7/brown.html>

<http://library.thinkquest.org/10718/>

CHECK US OUT ON THE  
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[WWW.OCSS.ORG](http://WWW.OCSS.ORG)

