

Curriculum Units by
Fellows of the
Yale-New Haven Teachers Institute
Guide
2000

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Preface

In March 2000, sixty-two teachers from twenty-three New Haven Public Schools became Fellows of the Yale-New Haven Teachers Institute to prepare new curricular materials for school courses. Established in 1978, the Institute is a partnership of Yale University and the New Haven Public Schools, designed to strengthen teaching and improve learning of the humanities and the sciences in our community's schools. Through the Institute, Yale faculty members and school teachers join in a collegial relationship. The Institute is also an interschool and interdisciplinary forum for teachers to work together on new curricula. The Institute has repeatedly received national recognition as a pioneering and successful model of university-school collaboration that integrates curriculum development with intellectual renewal for teachers. In 1998 it launched a national initiative to demonstrate that the approach the Institute has taken for twenty years in New Haven can be tailored to establish similar university-school partnerships under different circumstances in other cities.

Teachers had primary responsibility for identifying the subjects the Institute would address. Between October and December 1999, Institute Representatives canvassed teachers in each New Haven elementary, middle, and high school to determine the subjects they would like the Institute to treat. The Institute then circulated descriptions of seminars that encompassed teachers' interests. In applying to the Institute, teachers described unit topics on which they proposed to work and the relationship of these topics to Institute seminars and to courses they would teach in the coming school year. Seven seminars were organized, corresponding to the principal themes of the Fellows' proposals. The seminar entitled *Women Writers in Latin America* was led by Sandra H. Ferdman-Comas, Assistant Professor of Spanish and Portuguese. Between March and August, Fellows participated in seminar meetings, researched their topics, and attended a series of lectures by Yale faculty members.

The curriculum units Fellows wrote are their own; they are presented in seven volumes, one for each seminar. A list of the 143 volumes of Institute units published between 1978 and 2000 appears on the following pages. Guides to each year's units, a topical Index of all 1286 units written between 1978 and 2000, and reference lists showing the relationship of the units to school curricula and academic standards are available from the Institute. An electronic version of many of these curricular resources is accessible on the Institute's Web site (<http://teachersinstitute.yale.edu>).

The units that follow contain four elements: objectives, teaching strategies, sample lessons and classroom activities, and lists of resources for teachers and students. They are intended primarily for the use of Institute Fellows and their colleagues who teach in New Haven.

The DeWitt Wallace-Reader's Digest Fund and the National Endowment for the Humanities have provided the Yale-New Haven Teachers Institute major grants in the form of both endowment and program support. In addition, a number of individuals and foundations, notably the William Randolph Hearst Foundation, the Zimmerman Foundation and the Horace W. Goldsmith Foundation, have made gifts and grants toward the Endowment Fund for the Teachers Institute. The 2000 Institute was supported also by grants from the Sherman Fairchild Foundation, the Camille and Henry Dreyfus Foundation, the Jessie Ball duPont Fund, the Arthur Vining Davis Foundations, and the Howard Hughes Medical Institute. The New Haven Public Schools, Yale's partner in the Institute, has supported the program annually since its inception. The materials presented here do not necessarily reflect the views of the funding agencies.

James R. Vivian

New Haven
August 2000

I. Women Writers in Latin America

Introduction

Her hands, now old, move across the piano's black and white keys with the same grace and ease that characterize the words telling the narrative of her life. She is Mama Blanca in *Mama Blanca's Memoirs* . And she is Sor Juana speaking of silence and joyful learning in *The Response to the Most Illustrious Poetess Sor Filotea de la Cruz* . She is Esmeralda Santiago, returning to her life as a child in *When I Was Puerto Rican* . Alfonsina Storni asks sweet earth to make her a bed so she may die in it in *I'm Going to Sleep* and Gabriela Mistral, in *Close to Me* , aches with love for a child sleeping beside her. Macabea's life of ordinary misery perplexes and torments the narrator in *The Hour of the Star* , and he describes her death with distant irony. These are some of the stories told in poetry and prose in the women's writing in Latin America. In our seminar we read these and other texts to understand more intimately the lives of women in Latin America and to see how we read a literary work. The Fellows have written curriculum units related to the topic of our seminar, and their work is available for use in the classroom.

Christine Calvanese presents a close reading of Esmeralda Santiago's *When I Was Puerto Rican* and Julia Alvarez's *How the Garcia Girls Lost Their Accents* . Chris first presents a brief history of the Dominican Republic and Puerto Rico, then gives a biographical sketch of the two authors, and then chooses specific moments of the texts for analysis in her class.

Christine Elmore presents the lives of Frida Kalho, Rigoberta Menchu and Gabriela Mistral. She studies biography in order to bring history alive for students and to show how persons face and overcome difficulty. With the examples presented by these figures, Chris creates classes focusing on the power of the paintbrush, the spoken word, and the pen.

Lisa Galullo writes a curriculum unit designed for an Advanced Placement English course. She studies autobiography and Santiago's *When I Was Puerto Rican* , showing how to identify and analyze point of view, literary device, and narrative style and technique. Lisa discusses rhetoric, authority, voice, and cultural identity in this autobiographical text, and she includes numerous mini-lessons for use in the classroom.

Dora Odarenko focuses on certain features of Puerto Rican cultural life: the love of the island of Puerto Rico, or person of Puerto Rican decent, living on the mainland of the United States. Dora's reading and writing events draw from numerous picture books and young adult fiction, including Jane Yolen's *Encounter* and Nicholas Mohr's *Nilda* .

Diana Pena-Perez analyzes the use of the terms Hispanic and Latino in relation to Spanish-speaking immigrants in the United States and the history of these and other ethnic categories. Diana studies race, ethnicity, and identity through the writings of the Puerto Rican community, and she offers a variety of activities for use in the classroom.

Michelle Sepulveda teaches drama at West Hills Middle School. Her unit presents a picture gallery of women whose lives join the Caribbean and the United States. The gallery focuses on women born to the traditions of Puerto Rico, Cuba, and the Dominican Republic, and shows the experiences of these women through images of immigration, religion, daily life, and dual cultural identity.

Yolanda Trapp affirms the power and importance of poetry. She proposes a methodology for teaching poetry to children, and she presents lesson plans focusing on the texts of Gabriela Mistral, Alfonsina Storni, Delmira Agustini, Juana de Ibarbourou, Violeta Parra, Julia de Burgos, and Marfa Elena Walsh. Yolanda includes original translations, composed by her, of poetic texts by each of these writers.

We invite you to participate in this seminar through the reading and use of these curriculum units. The student and teacher bibliographies found at the conclusion of each are valuable resources for further study.

Sandra Ferdman Comas

Synopses of the Curriculum Units

00.01.01

A Woman's Immigrant Experience, by Christine Calvanese

This curriculum unit deals with women writers in Latin America. Julia Alvarez and Esmeralda Santiago are the two authors researched. Similarly both women write about themselves and their immigrant experience. I will present a brief history of the Dominican Republic and Puerto Rico. I will also discuss the current issue of diversity and the terminology relating to Latin America. I will provide biographical information on Julia Alvarez and Esmeralda Santiago to be discussed prior to reading the literature. This unit gives a literary overview and outlines critical thinking questions and activities for three works of literature: *When I Was Puerto Rican*, *How the Garcia Girls Lost Their Accents*, and *Names/Nombres*. This unit is structured and organized to bring about maximum success. Before reading teachers should encourage pre-reading strategies and vocabulary enrichment and development. In doing so, students will improve in the area of decoding, fluency, and reading comprehension. Teachers should also be committed to educate students through the writing process. Refer to the Appendix for reading and writing strategies. Finally, as a culminating activity students will give oral presentations by sharing their autobiographies. Students may also bring in food to share and to help express their culture.

(Developed for Special Education and Reading, grade 7; recommended for English and Reading, grades 7-10)

00.01.02

Exploring Character and Culture in the Lives of Three Remarkable Women of Latin America, by Christine A. Elmore

In her formative study, *Women of Smoke* (1989), Marjorie Agosin tells of the legacy of Latin American women writers who courageously defy their government's censorship and refuse to be silent. Relentlessly they speak on behalf of those people in their society, who suffer deplorable conditions caused by repressive dictatorial regimes. Some writers disappear and others are exiled but the words they write serve as keys or secret codes that "seek to open the doors of silenced cities and countries" (p. 12). All of this could be said of the evocative paintings of Mexico's Frida Kahlo, the articulate activism of Guatemala's Rigoberta Menchú, and the poetry of Chile's Gabriela Mistral.

In my curriculum unit I plan to have my third-grade students read about the lives of these three important Latin American women from very different walks of life. Biography is the ideal genre by which they can learn about the courage of these women in meeting the challenges of their times and the creative contributions they were able to render to their societies. The great appeal of biographies as a pedagogical tool is in their ability to make

history come alive for young readers. Written like fiction, often with dramatic action and excitement, these stories feature factual accounts of real events and real people whom we can admire and emulate, or abhor, and about whom we can seek further information in other sources. Biography is also an ideal introduction to the study and appreciation of 'foreign' cultures.

I have gathered numerous reference sources on the lives of Kahlo, Menchú and Mistral. Using these sources, I have written simple but interesting biographies appropriate for the age group I teach. Using a "think-along" format (used by the Steck-Vaughn Company), I have inserted key-questions at regular intervals in the texts that I have composed. This will encourage young readers-as Dr. Roger Farr, program author of *Steck-Vaughn Think-Alongs* writes-to take "think breaks" as they read. Thus, while reading these biographies in small group settings, students are encouraged to regularly to pause, think, and discuss the text they are reading. In this way, active reading-strategies of thinking along while reading are reinforced.

I have developed extension activities in this unit that will help students respond meaningfully to their reading in both oral and written ways. They are called upon to compare and analyze what they have read and to more closely examine the subject's traits, challenges, achievements, and important life events.

(Developed for Language Arts, Reading, and Social Studies, grade 3; recommended for Language Arts, Reading, and Social Studies, grades 2-5)

00.01.03

Truth and Identity in Autobiography: Teaching Esmeralda Santiago's novel *When I Was Puerto Rican*, by Lisa Galullo

When I Was Puerto Rican is compelling, entertaining and an exercise in effective storytelling. With this idea in mind, the first instructional issue raised for consideration is: Does Santiago's "storytelling" constitute a work of autobiography? This becomes a central theme in the unit for teaching students rhetorical, theoretical and personal approaches to reading and writing autobiography. This curriculum unit is divided into lesson plans and background instructional information for teachers.

Because students are naturally inclined to read and write about topics that concern themselves and their experiences in the world, autobiography is an appealing genre to students. In reading autobiographical novels and essays, students can find realistic role models. In writing autobiographical essays, students can find a rhetorical method for self-reflection. In this sense, a unit on autobiography can prove to be a valuable teaching tool for students of all ages and ability levels. Esmeralda Santiago's novel *When I Was Puerto Rican* is an autobiography that traces Santiago's memoirs through her childhood in Puerto

Rico and her transition from Puerto Rico to New York City. Her second memoir, *Almost a Woman* continues the spirited documentation of her adjustments and experiences as she grows up in New York City and attends the High School for Performing Arts. Santiago presents her work as an exploration of her search for identity and as a model for young people in their own search.

This curriculum unit is designed for an Advanced Placement (AP) English course for high school juniors, however it is easily adaptable to other secondary levels. The AP course is structured as an analysis of writing and rhetoric with an intense focus on preparation for the national Advanced Placement exam in language and composition, which students take in May. The main objectives of the unit are as follows. (1) Students will be able to identify and analyze and author's use of point of view. (2) Students will be able to identify and analyze the author's use of literary devices. (3) Students will be able to respond to the novel in terms of narrative style and technique as well as in relation to the novel's plot and themes.

(Developed for AP English, grade 11, and Honors English, grade 12; recommended for English, grades 9-12, and AP English, grade 11)

00.01.04

Nuestra Isla Our Island: Puerto Rico, by Dora Janeway Odarenko

This unit has two goals. The first is to acquaint students, including those of Puerto Rican descent, with three of the dominant aspects of Puerto Rican culture today: love of the island of *la isla* to which Puerto Ricans refer over and over again; strong ties with family and community; and accommodations to the diaspora, the dispersal of Puerto Ricans to the United States mainland, escalating in the 1950s, as Puerto Ricans attempted to escape overpopulation and poverty at home.

The second goal is to use the information, excitement, and questions generated by this unit to provide daily writing topics. As students work on them, and particularly on description and exploration of feelings, on inferring from a text and visualizing the pictures made by words, they will better understand what is meant by "elaboration." My hope is that, through this daily reading and writing, students will begin to compare and contrast aspects of their own lives to those of the characters about whom they are reading. They can stretch their imaginations, not only for their own lives but for the lives of others, and, in this way, begin to appreciate commonality and difference.

The students will not only read, listen, converse, and write. They will edit, peer-edit, publish and share what they have written. They will tape works in progress so that their own words become part of their experience of oral language. The unit will culminate with

a Travelers' Tea, to which families will be invited, so that students can have the experience of presenting finished work.

(Developed for Language Arts, grade 3; recommended for Language Arts and Social Studies, grades 2-4)

00.01.05

Understanding Ethnic Labels and Puerto Rican Identity, by Diana Pena-Pérez

The lessons in this unit engage students in learning experiences that will help them better understand the diversity of cultures within Spanish-speaking communities in the United States. The unit is appropriate for students in middle school and high school who are studying social studies, language arts or Spanish as a Foreign Language.

Students will become familiar with the labels currently being used in society to refer to the different Spanish-speaking groups in the U.S. The activities afford students opportunities to hone their critical thinking skills as they analyze, compare and contrast the terms Hispanic, Latino, and others that identify Spanish-speaking immigrants.

The unit also traces the origins of those names and students learn that they were created in the United States, as opposed to being ethnic classifications used in any Latin American country. Participants will analyze literary works that deal with the complexity of Puerto Rican identity. Students read a selection of poetry by prominent Puerto Rican American writers and learn through them about the history and rich racial makeup of this Latin American island.

As students discuss issues of label classifications and self-identification, they also are exposed to the concepts of culture and race from an anthropological perspective. They make connections between one's identity and one's culture, while other activities require them to draw from their own backgrounds to participate in group and whole class discussions. Finally, students will be asked to reflect on some of these issues in writing and will be assigned projects that exhibit their understanding of the topics.

These matters are to be presented to the students according to subject and grade level. The younger the students, the more abstract this topic will be for them. From my experience, the best way to approach cultural and racial issues is by drawing from the students' own background.

(Developed for Spanish, grade 8; recommended for Middle School and High School Social Studies, Spanish, and Language Arts, grades 7-8 and all High School grades)

00.01.06**Galeria De Pinturas, by Michelle Sepulveda**

“Galeria De Pinturas” is a curriculum unit designed to enlighten middle school students about Caribbean culture through the eyes of women writers. Through the use of essays and short stories, students will create dramatic pieces and sketches that will form the basis of choreography and poetry to be presented to the school body. A dramatic tool known as creating tableaus will be used to craft visual images that will be brought to life by the students.

Obviously, senses and sounds, as well as sights and scenes, will be used to be realistic when presenting the pictures that will make up the gallery. The use of frames built in Drama class will highlight the presentations in a frozen mode before coming to life.

The students will read material from three distinct islands in the Caribbean-Puerto Rico, Cuba, and The Dominican Republic. Through the study of these cultures we will identify the similarities and differences of these three countries. Our student body at West Hills Middle School has representation of these three cultures among it. The study of the Caribbean will enlighten the students about their peers as well as help us to celebrate National Hispanic Month from a fresh and feminine perspective.

(Developed for Drama, grades 5-8; recommended for Drama and Dance, grades 5-8)

00.01.07**The Power of Latin Women’s Poetry, by Yolanda U. Trapp**

In this unit I will introduce students to literacy work written by women writers in Latin America, and several aspects of their lives. In poetry I intend to opening a world of feelings to children of all grades. As educators we must lead children into poetry written by exceptional women.

Traditionally, the function of our schools has been to train for the thinking aspects of living. And this obligation, more than at any other time in our history, must continue to be one of the basic responsibilities of the school.

Research has shown that children learn best and remember what they have learned if they are actively involved in the learning process. When we present them with topics that have meaning to them and with ideas they can use in their everyday world, they learn the natural way, driven by curiosity and the impulse to grow. Then, the children are ready to explore, discover, hypothesize and learn - and to see the connections between what they have learned and what they want to know.

I believe that through selected poems of Latin women, I will find a more holistic approach to teaching reading and Language Arts, and students will discover the connection between reading, listening, writing, and speaking.

This unit may serve as a brief introduction to the rich field of poetry written by Latin women. Reading, recitation and writing poetry is an aid in developing language skills, like good pronunciation. It is suggested that the poems be read aloud, and many are short enough for easy memorization. Learning of vocabulary and grammatical constructions is facilitated by the literal English translations on facing pages. Students of Spanish and English will find here a rich selection of the finest poems written by Latin women, specially chosen for its quality and enduring popularity.

This unit is recommended for bilingual students and also for English-speaking students wishing to take part in a variety of cultural experiences.

(Developed for Poetry, Reading, Writing, Literacy, Language Arts and Bilingual, Social Studies, Inclusion – Special Education students, grades K-5; recommended for ESL-EOL Language Arts, Bilingual, Social Studies, Multicultural Studies, Science, and Special Education, grades K-5)

II. Crime and Punishment

Introduction

This seminar dealt with topics in the theory and practice of crime and punishment in contemporary America from the standpoint of politics and political theory. We dealt with various theories of the criminal law in light of debates about empirical evidence, the politicization of crime, civil rights issues, abortion, psychiatry and the law, and arguments about punishment and prison reform. I did not try to offer a comprehensive overview of the American criminal justice system, or even of the topics covered. Rather, my aim was to promote disciplined reflection about the difficulties and complexities of the ideas of crime and punishment as we operate with them in everyday life.

The readings and seminar discussions were organized around four topics: moral foundations of the criminal law, in which we discussed classic arguments about what the content of the criminal law should be, what obliges us to obey it, who should make the law (legislatures vs. common law courts), and how to reconcile its somewhat conflicting goals of retribution, rehabilitation, and deterrence. In the section of players and procedures in the criminal law we attended to the structure of the American courts system (state and federal plus tiers of review), the different rights and perspectives of defendants, victims, prosecutors, judges, defense attorneys and juries. We spent some time on what difference it should make to the operation of the criminal law that we live in a democracy, and we traced the history of right to court-appointed counsel for indigent defendants in some detail as a case study of how the criminal law evolves over time. In a section on politics and the criminal law we looked at the politicization of both crime and punishment, with attention to such issues as the war on drugs, the move toward private sector prisons, the significance of high-profile cases such as the Simpson or Menendez brothers cases, and the role of the criminal justice system in exacerbating or ameliorating racial tensions in the United States. In a final section on the edges of the criminal law we focussed on the juvenile justice system and the insanity, with particular attention to three issues: what they tell us about the limits of guilt and responsibility for criminal wrongdoing, the difference between punishment and treatment, and the differences between prisons and other total institutions such as mental hospitals and juvenile corrections facilities.

The seven fellows in the seminar worked on a variety of topics that to some extent cut across, and drew on, all these areas. Joan Rapczynski focused, in "Search and Seizure," on Fourth Amendment to the U.S. Constitution. Her unit combines an overview of the nature and purposes of the Bill of Rights, a window onto the changing interpretations of the Fourth Amendment on the Supreme Court over time, technicalities concerning the requirements of search warrants and the exclusionary rule (excluding illegally seized evidence from trial), debates about automobile searches and "racial profiling," rights to juveniles to privacy in the context of school searches. Angela Beasley-Murray wrote

"...By Reason of Insanity: An Exploration of the Mental Disease/Defect Defense," in which she explores the different legal tests for criminal culpability and the extent to which these comport with commonsense understandings of insanity as expressed in novels as well as standard medical definitions. In "Democracy Speaks Through Criminal Law," Joyce Bryant explores various ways in which the criminal justice system stands in need of reform if democracy is to speak through the criminal law. She focuses on the Bill of Rights, the jury system, the distribution of discretionary authority within the system, and the ways in which it exhibits racial and other biases.

Four fellows developed units on different aspects of the juvenile justice system. In "The Juvenile Justice System: The Real Deal" Deborah Smereczynsky focuses on the constitutional rights of juvenile offenders, the nature of juvenile proceedings, and the recent move to try juveniles as adults for increasing numbers of offenses. In "Juvenile Delinquency: Cause and Effect" Cynthia Roberts deals with status offenses-activities that would not be crimes if committed by adults but are when committed by children-and the role of the juvenile court. Joseph Wickliffe deals with debates about the causes of juvenile delinquency in "Why Juveniles Commit Crimes," and Afolabi J. Adebayo deals with the disposition of juvenile offenders in "Rehabilitation and Control of Juvenile Delinquency Offenders."

Ian Shapiro

Synopses of the Curriculum Units

00.02.01

Rehabilitation and Control of Juvenile Delinquency Offenders, by Afolabi James Adebayo

1. Students should be able to understand the process of juvenile rehabilitation.
2. This unit examines the process of rehabilitation and control of juvenile offenders, and also the process it takes to rehabilitate the juvenile offenders including all the players that are involved. The unit will cover the outline listed below. During the process, the students will be the major players in the discussion of juvenile offenders rehabilitation program.
3. The long time solution to the problem of juvenile crime falls largely outside of the law enforcement system. It requires strengthening those basic institutions- the family, schools, religious institutions, and community groups-that are responsible for instilling values and creating law-abiding citizens.
4. With respect to the first, large group of juvenile offenders, the juvenile system must be better designed to deter them from committing additional crimes. The goal of this unit is to prevent juveniles in this group from becoming chronic offenders.
5. Although, this unit will also address the issue of excessive lenience can result in additional transgressions, culminating in a life of crime. This unit will send a message to the juvenile that crime does not pay.

(Developed for grade 9; recommended for grades 7-12)

00.02.02

...By Reason of Insanity An Exploration of the Mental Disease/Defect Defense, by Angela Beasley-Murray

The media constantly bombards us with crimes that are horrendous, the crimes of passion and more frightening the crimes of dispassion. We are affected by our own fears of powerlessness and helplessness to stop such crimes. Our greatest fear is that perhaps we will become victims or that one of our own family members might commit a crime. We are all looking now what are the signs, hoping that what we see is not quite what it takes to commit a crime of national interest. What happened? In what situation could a six-year-old be that could cause him to want to be violent?

What is the rage in the skies, on our highways, in our schools, and in our homes? Why aren't we outraged at the fact we need more prisons to warehouse our explosive individuals committing crimes? Is the individual who is rageful responsible for his rage? What is the context of the life of the individual that one day goes ballistic?

"...By Reason of Insanity: An Exploration of the Mental Disease/Defect Defense" unit will provide the legal definition of insanity. The M'Naghten test and control inquiry defines and establishes for our criminal justice system an exacting framework to understand insanity. The courts look at the context of the individual defendant experience to determine mens rea, having a guilty mind.

(Developed for Reading, grade 10; recommended for Reading, grade 10)

00.02.03

Democracy Speaks Through Criminal Law? by Joyce Bryant

This unit is about our criminal justice system and how it operates. The rights that people have and how they can make use of them through several amendments to the constitution.

Our justice system as well as society at large is designed to treat people equally and fairly which does not happen. The system produces winners and losers because of their cultural, religious, ethnic, and economic background. Our criminal justice system is where society and the criminal, lawbreakers, and non-lawbreakers meet as adversaries. In this unit one will find that if democracy is to speak within our justice system, then our system needs to be reformed. There is too much corruption in our system among the police, prosecutors, judges, and defense attorneys when there should not be any.

As this unit is taught, students will become aware of our justice system and the effect that it will have upon their lives as they grow socially, emotionally, and intellectually.

(Developed for Reading and Social Studies, grade 8; recommended for Reading and Social Studies, grade 8)

00.02.04

Search and Seizure, by Joan Rapczynski

The curriculum unit presented will examine Amendment Four of the Constitution. It will look at pivotal issues surrounding the controversy of search and seizure as they have evolved over the years. The Bill of Rights promises individuals protection against the strong hands of the government. It is the Supreme Court that has made this guarantee a practical, living reality. Often at odds with public opinion and the interests of the powerful, the Supreme Court has woven individual rights into the fabric of American life.

Teachers will find this unit helpful when studying the Constitution and the Bill of Rights. Students will come to understand that there is a delicate balance between the protections guaranteed to citizens under the Fourth Amendment and the protections provided to society from crime. This balance is constantly changing and often reflects the changing values and attitudes of our society, as well as the changing political face of the Supreme Court. Supreme Court cases will be examined and students will be challenged to think about the complex questions raised by the need to balance criminal enforcement with the value of privacy and individual freedom. This topic offers many opportunities for involving a class in lively discussions about some of the critical issues of our time.

There will be six objectives in this unit. First, students will be able to trace the development of the Fourth Amendment as well as understand the purposes it serves. Second, students will become aware of the necessary requirements that must be included in a valid search warrant. Third, students will examine the many instances when a legal search is conducted without a warrant. Fourth, students will understand that automobile searches have proven controversial and in recent years racial profiling has been examined. Fifth, students will understand the significance of the exclusionary rule. Sixth, students will examine their rights to privacy versus search in the schools.

(Developed for U. S. History I and II, grades 10-11; recommended for U. S. History I, grade 10, and U. S. History II, grade 11)

00.02.05

Juvenile Delinquency: Cause and Effect, by Cynthia H. Roberts

This unit was written for a population of cognitively low-functioning special needs students in grades 9 - 12. By writing this unit on "Juvenile Delinquency: Cause and Effect," I want to raise students' level of awareness so that at an early age, students can avoid participating in criminal activities.

In this unit, we will discuss and present tools that allow youth to deal constructively with interpersonal conflicts, problem-solving techniques and behaviors of peacemaking skills. Students will acquire knowledge and skills needed to carry out their responsibilities and protect their rights as citizens of a free society.

Lessons in this unit will emphasize basic knowledge of juvenile crime, causes, offenses, treatment, and risk factors. As students work through this unit, they will continually make and judge decisions, and they will analyze decision making by government officials and those seeking to influence government.

The reward for learning this unit will be to make significant progress in the lifelong pursuit of becoming a good citizen in a free society.

(Developed for Civics, grades 9-12; recommended for Social Studies, grades 7-8, and Civics, grades 9-12)

00.02.06

Juvenile Justice/The Real Deal, by Deborah Smereczynsky

This is a unit designed to teach grades eight through twelve. The population to be taught is special education and regular education students. Currently I am an eighth grade special education teacher in an inclusion program. The special education teacher and the regular education teacher collaborate to give to the students the most and best education. This unit is a reflection of the work that I am responsible for throughout the school year, working with regular and the special education students, raising the expectations for all and reaching beyond that bar.

The unit to follow will be used for the duration of eight weeks in the United States History class and the Reading class. In the reading class we will read some of the articles in the suggested readings. This will prepare the class for the activities in the History class. The unit will be used with both regular and special education students.

As a final class activity, we hope to take a trip to our nation's capital, Washington D.C., in April of 2001. This will help the students further understand the lawmaking aspect of juvenile law.

(Developed for United States History, grade 8; recommended for History and English, grades 7-8)

00.02.07

Why Juveniles Commit Crimes, by Joseph A. Wickliffe

To those teachers who may wish to use this unit, it is designed as an educational tool to give you an idea about what children go through in life, the causes and effects. Once you understand why juveniles commit crimes, as a teacher, you will be able to better understand what resources are necessary to prevent our children from becoming juvenile delinquents. Whether this material is taught as a part of curriculum or as part of Social Studies, as a teacher, you can use it with many disciplines to get students' attention, and to understand what crimes are against the law and the consequences of committing these crimes.

Once you read the unit, you will understand the particular set-up of the family and how it influences the children, and why they commit crimes. The historical facts of crime and delinquency are hard to understand because we really do not always know what goes on in the minds of children. But despite that, as a teacher, educator, community member,

family member, or worker in the justice system, we can steer children away from crimes if we can all work together.

This unit presents ideas for lesson plans, and explains how to use the lesson plan to develop your own strategy to help shape children into responsible citizens.

(Developed for Social Studies, grades 9-12)

III. Constitutional and Statutory Privacy Protections in the 21st Century

Introduction

Though the incredibly rapid proliferation of new avenues of communication, especially via the Internet, has generated enormous discussion about problems of protecting privacy, there is surprisingly little pertinent constitutional or statutory law aimed at doing so. The word "privacy," in fact, does not appear in the Constitution of the United States.

Even so, in 1965, the Supreme Court discerned a broad "right of privacy" implicit in the Constitution in a case originating in New Haven, *Griswold v. Connecticut*. Later this ruling served as the basis for protecting many other rights, including a woman's right to choose to have an abortion prior to fetal viability. These kinds of privacy rights, however, are fundamentally rights to make certain sorts of decisions basic to one's life. They are not primarily about keeping information secret.

In 1967, in *Katz v. U.S.*, the Supreme Court adopted a new approach to the Fourth Amendment guarantee against unreasonable searches and seizures, ruling that the Amendment protected all areas and activities about which persons had a "reasonable expectation of privacy." Since that time privacy concerns have helped define 4th and 5th Amendment limits on governmental law enforcement practices. Again, however, these rights are not primarily about keeping one's personal information private.

Only since these *Griswold* and *Katz* rulings has "privacy" been an official element in American constitutional law. Yet it is not clear that these rulings really protect "privacy," so much as "autonomy" and "freedom from arbitrary police conduct." They also restrain only governmental actors, not the words or deeds of private businesses, organizations, or individuals.

In recent years Congress has sought to protect the privacy of medical, financial, and criminal records and e-mail through various laws, though these "rights of privacy" are statutory, not constitutional. So far, moreover, Congress has also chosen primarily to restrict governmental agencies and to leave communications industries, including "dot.coms," to self-regulation. It has, however, tried to prevent unwanted exposure to sexually explicit materials on the Internet. Those laws in some ways protect but in some ways restrain privacy, and they have also faced major First Amendment challenges.

Hence constitutional and statutory protections of privacy, particular safeguards for personal information, remain relatively sparse, even as privacy concerns are growing for understandable reasons. Governments and police are acquiring powers and technologies that make a "Big Brother" police state a potential reality. Corporations and inquisitive individuals can gain extraordinary access to personal data enhancing their power to shape

all our lives. And with the completion of the Human Genome Project and the advance of technologies of cloning and genetic engineering, parents, voters, and/or bureaucrats may be in a position to make basic decisions about the genetic makeup of future generations that could transform the very nature of the human species.

The seminar on "Constitutional and Statutory Privacy Protections in the 21st Century" explored all these issues primarily through examining legal cases described in Ellen Alderman and Caroline Kennedy, *The Right to Privacy*, along with excerpts from landmark Supreme Court cases, important statutes, and some pertinent news stories. Participants learned about the origins of constitutional privacy rights and the distinctions between *Griswold*-style "autonomy" privacy rights, 4th Amendment privacy rights, and "personal data" privacy rights. They discussed at length fascinating cases involving issues of drug law enforcement, school discipline, abortion, cloning, the "right to die," employer access to personal information and e-mail communications, press rights to publish personal data, limitations on sexual expression, and other "privacy"-related constitutional, statutory, ethical and public policy issues. Most participants began with a strong sense that heightened protections for privacy were desirable. Yet through the course of the discussions, many became wary of the consequences of extensive regulations to achieve this end, and some even questioned whether in most of these cases "privacy" really expressed well just what it was they most wanted to protect. All participants, including the seminar leader, gained a much richer knowledge of the legal and technological issues raised under various "privacy" rubrics today and a deeper appreciation of the vital but puzzling choices we now face.

The teachers drew on these readings and discussions to create curriculum units that skillfully employed "privacy" questions to advance learning by a wide range of students. High school business will learn by doing about the "cookies" that track their browsing habits, and they will discuss personal and legislative means of protecting privacy in face of such technologies. Business law students will examine the legal protections against "cybercrime" and the dangers that regulations pose for freedoms of expression. High school history students will learn about the systematic denials of privacy rights, along with other rights, many African-Americans have experienced at the hands of the criminal justice system and how these practices are to some degree now serving as precedents for limiting student rights. Students with disabilities and others will learn about the special concerns of the disabled not to be subject to special restrictions or to be compelled to disclose information that might subject them to job discrimination and embarrassment. They will also, however, explore the countering concerns to make sure that teachers and employers can provide best for the good of all in their classrooms and workplaces. Middle school students will vividly discover just how pervasive video surveillance in public places now is, including in many schools. They will then write and debate what, if anything, to do about such surveillance in ways carefully designed to meet New Haven Content Standards. Similarly, high school students will learn about the controversies over whether certain kinds of questions on writing assignments represent invasions of student

privacy, even as they develop the writing skills to perform well on the state CAPT writing test. Finally, gifted middle school students will be invited to ponder and debate the emerging issues of whether the reproductive freedoms protected in the contraception and abortion "privacy" cases extend to new kinds of genetic engineering, including cloning and genetic enhancement.

These units are well researched, broad ranging, and stimulating. In the end, however, they can only begin to probe the profound questions about privacy and freedom that technological and social developments are now posing for us all. Many of these are topics that students are certain to find enormously intriguing. Hence, perhaps, the teaching of these units, and many others on different aspects of these "privacy" themes, will produce citizens better able to respond wisely to the constitutional and statutory challenges involved in protecting privacy in the 21st century.

Rogers M. Smith

Synopses of the Curriculum Units

00.03.01

Invasion of Privacy--Has Cyber-Technology Made Privacy a Thing of the Past?, by Valarie Arrington-Steele

This curriculum unit addresses the issues of online personal-information privacy as it relates to privacy policies, online profiling using cookies, and the position of privacy advocate organizations versus the U.S. government's position on self-regulation of e-commerce.

Students are taught how to evaluate privacy policies to make informed decisions as to whether they would like to do business with a particular Web site.

Students learn how cookies track their browsing activities to create online profiles. They also learn how to delete cookies and change their computer settings to reject or accept cookies.

Students learn about privacy advocate organizations and the concerns they have for protecting online personal-information privacy by calling for legislative regulation of e-commerce.

Students learn what legislation has been passed to protect our privacy based on ever-changing interpretations of the Fourth Amendment to the Constitution because of societal and technological changes.

Students assess the government's hesitancy to regulate e-commerce.

The unit is designed for high school students in the following classes:

Computer Literacy
History
Law
English

(Developed for Computer Literacy and Computer Applications, grades 10-12; recommended for Computer Literacy, History, Law, English, and Computer Applications, grades 10-12)

00.03.02

How Public Should Public Education Be? Privacy in the Classroom and School: CAPT Interdisciplinary Practice, by Jennifer Drury

The unit is dedicated to an understanding of current privacy laws and controversies regarding students in public schools. The understanding is then utilized to bring about a discussion of student privacy in the classroom. This discussion is the basis for students to write a persuasive essay that has a strong introduction and conclusion and utilizes material from the articles discussed. The unit clearly delineates current law and contrasting opinions. Also discussed are two educational reforms that have brought privacy issues into the classroom: the values-clarification approach and Outcome Based Education. Finally, the CAPT is discussed so those teachers outside Connecticut who wish to utilize the unit understand the purpose and focus of the CAPT. Four lesson plans bring the students from the discussion of privacy to the actual final draft of the persuasive essay that explains their own opinions on the topic given the information from the articles.

(Developed for English I and II, grades 9-10; recommended for English I and II, and Social Studies, grades 9-10)

00.03.03

Constitutional Privacy in the 21st Century The Information Highway & Your Right to Privacy, by Leslie Judd-Paier

In the twenty-first century we find ourselves surrounded by a world of mass communication, high technology and instantaneous transmissions of words and visions. People all over the globe can communicate by telephone, by computer and by facsimile machine in seconds. We can talk, we can write, and we can send pictures. This ability to communicate via the Internet has enhanced the lives of people around the globe in many ways. It has also raised new legal and ethical questions.

This particular unit addresses some issues regarding the 1st and 4th Amendment rights of American citizens. The 1st Amendment focuses on your right of free speech while the 4th Amendment deals with your right to privacy. However, both these Amendments are limited to the powers of the federal government. They do not protect citizens from other private individuals or businesses.

At the time of this writing, the Internet and its legal boundaries are being tested and defined. Because the Internet is so new and its widespread use has not been as anticipated, laws to protect a person's privacy are not in place. Innumerable legal controversies relating to the Internet and your right to privacy are beginning to surface.

Upon completion of this unit, students will have a better understanding of how they are protected by the 1st and 4th Amendments in the Bill of Rights. Lessons begin with thought-provoking questions to get the students going. Lessons provide students with hands on activities. Lessons are designed to stimulate student thinking about themselves, the Internet and our legal system.

(Developed for Business Law, grades 10-12; recommended for Business Law, grades 10-12)

00.03.04

Democracy, Race, and Privacy: The Hypocritical Failures of the United States, by Jimmy-Lee Moore

This unit is designed to provide students in grades seven through twelve with opportunities to engage in critical, analytical, and creative thinking skills. It will also help students become familiar with the U.S. Constitution, with emphasis on the Bill of Rights. While examining the fallacies inherent in what America calls "democracy," students will utilize intellectual curiosity, objectivity, open mindedness, flexibility, intellectual honesty, decisiveness, and persistence as tools for extrapolating purpose and meaning from documents. They will use real world examples as catalysts for class discussions, cross reference factual information with theoretical postulates, understand the importance of utilizing intellectual skepticism, as a means of analyzing and quantifying information, and learn how to develop better persuasive writing techniques.

This unit can be infused into a study of history, or critical thinking.

(Developed for TAG-Future Problem Solving, grade 7; recommended for History and Critical Thinking, grades 7-12)

00.03.05

Privacy in the Age of Video Surveillance This Is Not Your Father's Candid Camera, by Angelo J. Pompano

The purpose of this unit is have students consider how many times a day their privacy is compromised by unseen video cameras and to have them understand that neither the 4th Amendment of the Constitution nor any statutory provision really protect them. The unit is concerned with privacy as it relates to closed circuit television used in surveillance by both government agencies and private corporations. It is intended to be used with 8th grade social studies classes but may be adapted for use with other grade levels and subject areas. It is aligned with the Reading, Writing and Speaking Content Standards of the City of New Haven.

(Developed for Video Production, grades 7-8; recommended for Video Production, Social Studies, Reading, Writing, and Speaking, grades 7-8)

00.03.06

Privacy Issues and Disabled Persons, by Joanne R. Pompano

Our privacy and confidentiality rights seem increasingly to be challenged. Many experts believe that the threat to privacy is greatly increased in this age of information where personal and business data can be linked, transferred, shared and sold, usually without knowledge or consent of individuals involved.

The right of privacy is also a very important issue for handicapped individuals. For some persons who are disabled, threats to privacy and confidentiality are problems that they deal with on a daily basis.

Privacy issues that are of special concern to handicapped people include:

1. the control of computerized data concerning their disability including distribution of this information to employers, associates, government agencies and merchandisers
2. the desire not to be compelled to give information to government bodies, employers, and merchants about their handicapped and medications they may be taking because of their handicaps
3. the desire to have unimpeded rights about reproduction, including decisions as to whether fetuses should be tested and corrected for handicaps
4. the special problems of confidentiality in school settings

Developed for students in grades 11-12, this unit will allow handicapped students and their non-handicapped peers to explore issues of privacy as they pertain to the disabled persons.

(Developed for Special Education, grades 11-12; recommended for Special Education, History, Law, and Social Studies, grades 11-12)

00.03.07

Human Cloning, Genetic Engineering and Privacy, by Carolyn Williams

This unit invites students and teachers to take a look into medical technologies of the future, namely cloning and genetic engineering. It is designed as an eighteen-week course in Future Studies for seventh grade Gifted. However it is written so that others may use

any part of it in science, writing, or drama classes. Generally the unit explores some of the current research data in these areas, explores the government's position on the research and practice of cloning and genetic engineering, highlights some of the positions taken by American citizens, and raises questions about our right to privacy in choosing to practice cloning or opting to have ourselves genetically altered. Students are asked to discuss, write and debate and various situations in an attempt to understand the ideas that promise to be a part of their future.

(Developed for Future Studies, grade 7; recommended for Science, grades 7-8, and Writing, and Drama, grades 7-9)

IV. Ethnicity and Dissent in American Literature and Art

Introduction

This volume of nine curriculum units grows out of a seminar devoted to topics of race, ethnicity and gender in American culture. Our goal in the seminar was to compare and evaluate the many traditions of dissent in American literature and the visual arts. Though artists of color have been producing art for centuries, their work often has no home in the public school curriculum. It is tucked away in end-of-the-chapter sections in the standard surveys of American literature; or it is confined to special weeks within the calendar year when we celebrate ethnic and racial histories; or it is taught informally at the instigation of teachers who wish to supplement the curriculum with little official help or guidance.

This volume is designed to help teachers bring art and literature that concerns itself with *difference* directly into the classroom. The nine units within the volume grew from seminar discussions that focused on the art and literature of African-Americans, Asian Americans, Latinos and Native Americans.

What unites the work of virtually all artists of color within the United States is "double consciousness," a notion first articulated by the black writer, critic and educator W.E.B. Du Bois at the turn of the century. In *The Souls of Black Folk*, Du Bois described the manner in which African-Americans experience their identity in a racialized environment that is frequently hostile. He noted the ways that blacks, and by implication, other peoples of color, see life through a dual filter: both as members of the society at large and as *black* members of that society. Du Bois felt that this capacity of double vision, to see as mainstream society sees, and also to see with the detachment-and the insight-that the mainstream society *lacks* , was both a gift and a burden.

During the seminar, we went back to the literature of colonial America to the poetry of Phillis Wheatley. There we saw Du Bois' terms already at play almost a century before Du Bois was even born. Wheatley's poetry is written from a dual perspective. It presents the language and beliefs of her Enlightenment culture, at the same time as it explores the special dilemmas facing blacks in eighteenth-century Boston. Her poetry is "double-coded." It speaks both to a white reading audience, and, at a covert level not visible to that white audience, it also addresses its black readers, whom it treats as part of an imagined "alternative public sphere." In so doing, Wheatley's poetry sets a pattern for how African-American and other "minority" literatures would operate over the next two centuries.

The question of "double-coding" and "double-consciousness" persists in the writings and artistry of many twentieth century figures we examined in the seminar. Chicana writer Sandra Cisernos, along with artist Carmen Lomas Garza, both portray the lives of

working class Mexican Americans with an eye to the roles played by gender and race. Cisneros and Lomas Garza explore the struggles, the contradictions and the violences that define the lives of their characters. They create a utopian vision of what-might-be by re-imagining what has been.

In Toni Morrison's first novel, *The Bluest Eye*, the spotlight shifts from ethnic traditions to the role of mass culture in shaping the way we see each other (and ourselves). Morrison's scathing novel sets the rhythms of jazz and African-American musical forms against the racial ideologies implicit in Hollywood cinema and such apparently benign texts as "Dick and Jane" readers. Morrison's work is complemented by African American artists like Fred Wilson and Robert Colescott, both of whom question the ways that racial stereotyping pervade virtually all our cultural institutions.

In a different vein, Japanese American writers like Hisaye Yamamoto examine the impact of the Japanese American internment camps during World War II upon the lives of their occupants. Yamamoto explores the ways that communities create scapegoats and diversions-what she terms "legends"-to help them forget or evade their experience of trauma.

Native American author Leslie Marmon Silko, in her remarkable novel *Ceremony*, pursues what it means to be a hybrid, a figure born of two cultures, Native and Euro-American. Silko seeks to renew Native traditions by *altering* them, refitting the old rituals for a changed world.

Finally, we concluded our seminar with filmmaker John Sayles' *Lonestar*, a powerful and visionary film about the ways that race and ethnicity collide-and finally coalesce-in the New World. Sayles' film, like Silko's novel, produces a new American story that replaces the old stories, the old Westerns, that once dominated our imaginations.

* * * * * The Curriculum Units that follow are arranged in alphabetical order by author. They are all strong and provocative pieces, and I urge the reader to consider them for adaptation in your classroom.

1. Val-Jean Belton, in "African-American Art and the Political Dissent During the Harlem Renaissance," focuses on painters and sculptors of the Harlem Renaissance. After providing a general background for her high school students, Belton looks in particular at the paintings of Aaron Douglas, whose canvases and murals combined Cubist motifs with African and African-American subjects.

2. Leslie Fellows takes gender as her central topic. In "Women Writers and Dissent in 20th and 21st Century Literature," Fellows provides her high school English students with a wide-ranging sample of women writers over the past 150 years. Fellows organizes

her materials according to three recurring issues: entrapment, anger, and the search for a new identity. Fellows shows how each topic allows the writers she considers to explore and critique the gender codes that society establishes for them.

3. Donna Frederick-Nezcek looks at the history of Japanese Americans in her unit, "Our Past Acclaims Our Future, Japanese American Artists Respond to the American Experience: Roger Shimomura, Sansei." Nezcek introduces her high school art students to the history of Japanese Americans, and then describes a variety of art-related exercises to help her students visual their own experiences and their relation to the experiences of Japanese Americans. Her unit looks in particular at contemporary Japanese American artist Roger Shimomura, whose work combines traditional Japanese forms with images and figures from contemporary American mass culture.

4. Sandra Friday looks at the Harlem Renaissance as a watershed moment in the history of African-American culture. In "The Harlem Renaissance Births a Black Culture," Friday combines lessons in the literature and art of the Harlem Renaissance with a variety of exercises, from Internet research to mural painting, designed to acquaint her high school students (and their parents) with this central moment in African-American history. Friday's unit integrates English lessons with art instruction.

5. Leigh Highbridge, in "What's in Your Medicine Cabinet? Exploring the Cultural Heritage of Our Personal Belief Systems," transforms her high school drama class into a space for multicultural education. Rather than focusing on a single ethnic tradition, Highbridge asks her theater students instead to explore the ways that they do (and don't) interact with students of other ethnicities. Her goal is to make the students aware of their own predispositions and ways of thinking regarding others.

6. Focusing on the Mexican family, Geraldine Martin introduces her elementary school children to the customs and culture of Mexico. In "Friday and Friends: A Prospectus of the Mexican Family through Children's Literature," Martin combines a wealth of children's stories with her skills as a puppeteer to teach her young students about how children live south of the border.

7. Jon Moscartolo turns to middle school art classes to help his students understand HIV/AIDS and the ways that illness can provoke the same sorts of responses that racial discrimination produces. In "HIV/AIDS and the Healing Community: Self-Portraits Toward Wellness," Moscartolo has his students produce self-portraits that incorporate the lessons they learn from viewing a series of 36 powerful portraits created by Moscartolo of individuals and families from a summer camp for children with HIV/AIDS.

8. Dina Secchiaroli presents an overview of Latino art and culture in the United States in her unit, "Latin Culture Through Art and Literature." She takes her high school literature

students on a tour of the various Latino communities in the United States, instructing them in the culture, customs and literature of each group.

9. Jean Sutherland tackles the question of how slave communities *resisted* slavery in "Using Children's Literature to Examine the African-American Resistance to Injustice." Drawing on a variety of children's books, Sutherland introduces her elementary school students to the various ways that slaves fought and resisted the inhumane conditions of plantation slavery.

Bryan J. Wolf

Synopses of the Curriculum Units

00.04.01

African-American Art and the Political Dissent during the Harlem Renaissance, by Val-Jean Belton

This unit is designed for High school students who are enrolled in Advanced Placement studio art classes. This unit will introduce these studio art students to the visual culture of African American art. This unit will also teach students about the history of the Harlem Renaissance from the beginning of the early 1900's to the fall of the Renaissance in the early 1950's.

Through this unit students will also learn to analyze and critique the political statements that were represented in visual form. Meta Warrick Fuller, Palmer Hayden, William H. Johnson, and Aaron Douglas were all prominent African American artists during the time of the Harlem Renaissance. This unit will briefly explore each of these prominent artists and their contribution to the making of African American art during the Harlem Renaissance.

Various reproductions and slides will be used in order to help students gather a clearer understanding of the history of the Renaissance. The visual slides and reproductions will be used to help student analyze and focus on the social and political statements that are made in each painting.

During the teaching of this unit students will have the opportunity to visit various art galleries in the Connecticut and New York areas. They will also have the opportunity to gather information first hand using various Internet Web sites and once they visit The Schomburg Center for Black Culture, New York Public Library.

This unit also contains three lesson plans that are a result of the cultural and heritage portion of the unit. This unit also adheres to certain visual arts standards that are part of the visual arts curriculum in the New Haven Public Schools.

This unit will take approximately 35 days to complete. Students who are enrolled in Advanced Placement Studio art courses will have the chance to use this unit as part of their concentration portion for their general portfolio.

(Developed for AP Studio Art, grades 11-12, and Advanced Art, grades 10-12; recommended for AP Studio Art and Advanced Art, grades 10-12)

00.04.02

Women Writers and Dissent in 20th and 21st Century American Literature, by Leslie Fellows

"Women Writers and Dissent in 20th and 21st Century American Literature" is a unit that introduces students to the works of a wide variety of American women writers from various times, races and cultures. The unit analyzes three major ways in which these writers have expressed their dissent: 1) the theme of feeling trapped by society's expectations and/or stifled by traditional female roles; 2) the theme of anger and/or alienation; and 3) the theme of searching for identity, power and a voice. In addition to having a strong literary component, this unit also includes significant information about the history of American women over the past century, as they fought for equality with men, and for political and social rights. The unit will connect major events and ideas in women's history with the themes that occur in the literature on the syllabus.

(Developed for English, grade 10; recommended for English, grades 9-12)

00.04.03

Our Past Acclaims Our Future: Japanese-American Artists Respond To the American Experience Roger Shimomura, Sansei, by Donna Frederick-Neznek

"Our Past Acclaims Our Future, Japanese American Artists Respond To The American Experience: Roger Shimomura, Sansei," provides a history of the Japanese people and an "unofficial" history of our collective lives. This unit addresses isolation, identity, and social change through the examination of artistic production using an interdisciplinary critically based approach.

The unit engages students in social analysis, concerns of diverse communities, exploration with their art as a form of communication. The focal point of this unit is the life and work of Japanese-American artist Roger Shimomura, whose work is an aesthetic and political comparison between contemporary America and traditional Japan.

Students are given the opportunity to compare and contrast Shimomura's vision to diverse contemporary and post-modern artists. Additionally, this unit attempts to affirm the diversity in art production by artists with alternative models of expression and representation. This unit includes art production activities.

(Developed for Drawing and Painting 3, grade 11; recommended for Art and Interdisciplinary Art/History, grades 9-12)

00.04.04

The Harlem Renaissance Births a Black Culture, by Sandra K. Friday

This unit, "The Harlem Renaissance Births a Black Culture," is designed for at-risk high school students. I have found that the students, most of whom are persons of color, at the Wilbur Cross Annex have very limited knowledge of the Harlem Renaissance. I have chosen to create this unit because this historical phenomenon is rich in visual art, literature and music, and because, for many of my students, studying this period can contribute greatly to their understanding of their own heritage.

The study of the Harlem Renaissance lends itself not only to the study of visual arts but to hands on art projects. Also, students can explore the Internet to research a wealth of information that may be found there on this topic. Harlem itself is close enough to New Haven for a field trip to the Schomburg Center for Research in Black Culture; and a culminating celebration, "Harlem Renaissance Night," to showcase what students have researched and created seems like another obvious activity to reinforce the content of the unit and to enhance the students' self images.

The lesson plans I have developed focus on art projects that may be done in a school like mine where there is no art program, and on the Language Arts section of the CAPT. I recommend that this unit be team taught by an English teacher and an art teacher, two English teachers, or an English teacher and a social studies teacher.

(Developed for High School English, grades 9-12; recommended for American Literature and Art, and High School English, grades 9-12)

00.04.05

"What's In Your Medicine Cabinet?" Exploring the Cultural Heritage of Our Personal Belief Systems, by Leigh Highbridge

This unit was written for teaching Motivation and Justification in an Acting I level high school course. Any of the three lesson plans could be used as a supplement to any course curriculum that examines the development of a person's or a community's morality, belief systems, traditions and customs.

This curriculum unit is designed to optimally create an ensemble group dynamic that respectfully encourages different opinions and supports different methodologies. Perhaps most importantly, this cooperative group dynamic respects other people's reasons and ways of doing things, even if they disagree with the reason or practice being considered. Each individual learns how to disagree in a respectful manner, and to continue to work together cooperatively and supportively. Improvisational exercises foster creative cooperation, and the consideration of multiple options when making a decision.

This unit starts with the metaphor of a medicine cabinet, and takes the students through a step by step progression to evaluating the development of morality. The students will first examine common physical ailments and their remedies. The discussion, which follows the first exercise, will modify the metaphorical example to replace physical ailments and remedies with emotional or moral dilemmas. Throughout all the lessons, the students will be presented with opportunities to view behavioral responses as appropriate or inappropriate remedies.

(Developed for Acting I and Theatre, grade 9; recommended for Acting and Theatre, grades 9-11)

00.04.06

Friday and Friends: A Prospectus of the Mexican Family through Children's Literature, by Geraldine Martin

In my unit I use strategies in which children use puppetry and American literature in reading and analyzing ancient family traditions, their resistance to Spanish control, and their impact on the Mexican culture of today.

Friday Funtastic (a puppet) assists the children in gathering information about the home and family life in Mexico, and how the ancient customs have influenced present day Mexico. A look into the Spanish conquest will help the children see how that culture has blended into the native Indian culture. In addition, we will look at this blend and how it has affected our own culture in United States of America. A great source of information is the World Wide Web along with various other resource books where Friday is able find factual information pertinent to introducing a story in class. Books such as Today is the Day by Nancy Riecken, Shirley Climo's book, The Little Red Ant and the Great Big Crumb, and The Spirit of the Maya: A Boy Explores His People's Mysterious Past by Guy Garcia are just a few stories found in the unit.

The unit includes activities suitable for children in kindergarten through third grades with an emphasis on literacy for the first grade child. Along with reading and the language arts, the lesson plans cover curriculum areas such as math, social studies, science, music and art.

(Developed for Reading and Language Arts, grade 1; recommended for Reading and Language Arts, grade 1)

00.04.07**HIV/AIDS and the Healing Community: Self-Portraits Toward Wellness, by Jon Moscartolo**

This art unit introduces the students to a series of paintings entitled, "Portraits of the Healing Community," as a way of increasing HIV/AIDS awareness in middle school students. The Healing Community is a family of summer camps founded in Maine in 1992. It functions in Rhode Island and New Jersey, and now enters its ninth year of operation. These portraits are celebratory in nature representing campers, their parents, staff, and volunteers as families living with AIDS. Painted in acrylic, the series also introduces students to a variety of techniques and media.

The object of the unit is to increase the students' awareness of HIV/AIDS through viewing these paintings, and then create a self-portrait that connects their personal self-awareness with their sense of community.

Art used in the context of AIDS Education through drawing and painting explores painting and drawing as a healing experience.

(Developed for Art, grade 8; recommended for Art, grade 8)

00.04.08**Latin Culture Through Art and Literature, by Dina Secchiaroli**

The purpose of this unit is to help students better understand Latin culture. They will learn the history of Latinos and how their experiences and values are found in literature and art. Students will also explore the difficulties and problems Latinos had to and still have to face. They will then explore their own culture and identity, through the issues raised in the art and literature. Through this unit, students will gain a deeper understanding of their peers and their selves by comparing and contrasting the Latin culture to their own.

(Developed for American Literature, grade 11; recommended for English, Art, and History, High School grades 9-12)

00.04.09**Using Children's Literature and Art to Examine the African-American Resistance to Injustice, by Jean E. Sutherland**

This unit uses both children's literature and various works of art to help students better understand that their perception of helpless African-American victims meekly submitting to an unjust system is not a full or accurate one. They will become familiar with the presence of a forceful resistance that existed in the African-American community, beginning with the period of slavery up until the present. Special emphasis will be placed on the role played by families and seemingly ordinary people in facing the struggle. A number of books, works of art, and films present a look at these different periods in African-American history. Students will uncover the roles played by these individuals and groups of people involved in the struggles of each period. A multidisciplinary approach is used.

Though designed for a third grade classroom, material in this unit is suitable for students through middle school.

(Developed for Reading, Language Arts, and Social Studies, grades 3-4; recommended for Reading, Language Arts, and Social Studies, grades 3-6)

V. Sound and Sensibility: Acoustics in Architecture, Music, and the Environment

Introduction

The present volume presents 11 diverse subjects that share a common premise. Through an understanding of aspects of the acoustics, one can approach education and culture from a unique perspective.

Whether in using sound as a vehicle to motivate education in mathematics and science or to understand how diverse cultures have employed music in celebrations and every day life, we note that this subject has universal appeal.

Because each person is, in some respects, already an expert in acoustics (we hear and we speak in an advanced language system), several units begin with what we already know intuitively and then try to build on that knowledge. Important to the subject is an understanding of how we hear, not only for its academic interest but also for understanding how important it is to protect this unique path to human communication. Several units try to tune this unique perceptual instrument so that we are more attentive to our acoustical environment, whether it is in understanding music better or in understanding how environmental noise can impact our lives. Two units focus on the power of speech and its uses in story and drama.

A series of units coalesce around the cultures of Brazil and Kenya, integrating geography, social studies, and music to trace the traditions of these countries and how European and African influences were exported to the emerging culture of Brazil. Rosmarie Mongillo approaches the subject from the point of view of geography in her unit, "The Sounds of Samba" (in Brazil). Judith Dixon picks up this theme by examining "Brazilian Culture Through Music," whereas her colleagues from East Rock Global Magnet School, Jacqueline Porter and Doreen Canzanella, focus on the "The Sound of Music in Kenya," and "Exploring Folk Instruments and Sounds of Kenya and Brazil," respectively. Joe Lewis of the same school undergirds these efforts in his efforts with "The Science of Sound and Instruments."

Science, music, and reading come together in two complementary units from teachers of Roberto Clemente Middle School, in Mary Jones' unit on "Math and Science Objectives Taught Using Sound and Music Concepts" and Pamela Tonge's "Basic Reading of Sound Words-Onomatopoeia."

The use of speech in drama, with emphasis on the human voice and hearing, is the topic of Yel Hannon Brayton's "Tuning the (Human) Instrument for Actors and Writers." Her unit contrasts with that of Lewis Spence, also of the Betsy Ross Arts Magnet Middle School, who explores "Discovering The Mathematics of Sound." The mathematics theme

is picked up by high school mathematics teacher, Andrea Sorrells, in her unit, "Sounding Off About Trig."

Finally, Eddie Rose of Riverside Education Academy tries to encourage hands-on problem solving and explore the relationship of architectural sound to science and mathematics in his unit, "The Acoustic House."

The Fellows of this seminar brought a great wealth of information and enthusiasm to this subject, educating each other and this seminar leader, and stimulating many interesting sessions. Teachers perusing these units will find entire ones that can be imported into their classrooms as well as a variety of bits and pieces, in the forms of demonstrations and hands-on experiments, that will engage student curiosity and promote both confidence and competence in learning about the many aspects of acoustics in our world.

Robert E. Apfel

Synopses of the Curriculum Units

00.05.01

Tuning the Instrument for Actors and Writers, by Yel Hannon Brayton

The ear is an extraordinary conduit for sound from its outer fleshy cup to its intricate interior. And for those of us lucky enough to have two of them in relatively good working order, sound not only enhances our lives, but our ability to hear and interpret it instinctively protects us as well. Therefore, understanding the "fundamental scientific principles underlying the behavior of sound," as well as "human responses to sound" (as stated in Professor Apfel's summary of the Sound and Sensibility seminar) makes up the spine of this curriculum unit upon which creative writing and theatre pedagogy are fleshed out in the areas of: voice, prose and poetry writing, and reading. Through the arts, which by their nature are interdisciplinary - as they encompass history, language, science, and mathematics- the unit focuses students on "real world" targets with "real world" activities, where they are given ample support to explore a variety of resources and to "experience" their learning. It is my hope that they will gain the kind of bone-marrow learning that results in critical as well as creative thinking, evocative and provocative exposition and persuasive and articulate speech.

"Tuning the Instrument" is designed for 7th and 8th grade Creative Writing and Theatre classes. As these are elective classes, topics are introduced yearly at my discretion. However, Science and Language Arts teachers may find some of the lessons useful as they relate to their curricula with regard to anatomy, and reading and writing respectively. Under Title II of the Goals 2000: Educate America Act - which acknowledged the arts as core subjects comparable in importance to traditional content areas - an arts program, such as ours at Betsy Ross Arts Magnet School, should be aligned to certain criteria as set forth in the document, National Standards for Arts Education (published in 1994). This document is a 142-page book composed by the Consortium of National Arts Education Associations, and was funded by grants from the Department of Education, the National Endowment for the Arts, and the National Endowment for the Humanities. Cultivating the whole child, building many kinds of literacy, developing intuition, reasoning, and imagination, are some of the aims of this unit that align with the arts program standards.

(Developed for Theatre, Drama, and Creative Writing, grades 7-8; recommended for Theatre, Drama, and Creative Writing, grades 5-8)

00.05.02

Exploring the Folk Instruments and Sounds of Kenya and Brazil, by Doreen L. Canzanella

The unit is designed for third grade students, but can be modified easily to educate primary or challenge middle school students. It is to be used as part of a 4-person team. One middle school class to study Kenyan culture, one middle school class to study Brazilian culture, one middle school class to study the science of sound, the fourth class being this unit.

Following the cultural sound development in Kenya and Brazil the students explore the folk stories and customs of each nation. In turn, they solidify their understanding of basic musical knowledge of beat, rhythm melody inherent to all music. As the students deepen their conceptual understanding of music, they work in tandem with each other and the cross-curriculum classes, each bringing their newly acquired knowledge to the third grade class.

As a final project, the third grade class composes 16 bar folksongs in the style of Kenya and Brazil. They create instruments representative of each country and perform them for an International Festival.

In this unit it is intended that the students have a good solid understanding of keeping a steady beat, rhythmic notation, and Pentatonic scales. They should also be familiar with improvising a 4 bar phrase within the parameters of a certain style. They should also be comfortable expressing ideas and the process of brainstorming an idea within team units.

(Developed for General Music, grade 3; recommended for International Studies, High School grades 9-10; Science, Middle School grades 6-7; and Music, grades 6-8)

00.05.03

Brazilian Culture through Music, by Judith Dixon

I am a special education teacher at East Rock Global Magnet School. I teach in a fifth grade inclusion classroom. East Rock is diverse and we promote this in our teachings. Through collaboration I will integrate science, social studies, language, reading and music in this unit.

The diverse population of students will benefit from such an experience. Each festivity celebrated in the country of Brazil will be introduced during one marking period. Role playing and tactile hands-on activities will culminate each lesson. Cooperative groups will be responsible for each cultural event.

Through this unit the students will learn the importance of music in culture. We will investigate the history of music in Brazil and discover what the different sounds or types of music mean for each cultural event. With the assistance of our magnet school resource teacher, we will investigate a variety of experiments to incorporate the science of sound for a science fair project. We will also utilize our music teacher to make musical instruments and learn how to play them.

(Developed for all subjects, grade 5; recommended for Social Studies, Music, and Science, grades 4-5)

00.05.04

Math and Science Objectives Taught Using Sound and Music Concepts, by Mary Elizabeth Jones

This unit was designed to be taught by a middle school teacher of math and/or science. The unit explores sound from its origins to the present. Students will learn about the characteristics and types of waves. Wave frequency, pitch, amplitude and wave velocity are covered. Included in the unit are many classroom activities and research activities. The unit will be especially beneficial to students with a limited musical background.

The unit is divided into three sections. The first section covers wave characteristics, sound velocity, pitch and frequency and the Doppler effect. The second section explores amplitude, sound pressure level, noise and musical sounds. The last section focuses on persons involved in the origin of sound.

Students will learn to apply appropriate formulas in order to make mathematical calculations using data such as the speed and velocity of sound. Algebraic expressions will be constructed and solved using data collected in science class or supplied by the teacher.

Students will learn to collect and analyze scientific data. The data can be used to teach graphing skills.

There are several hands-on mini labs, which will allow students to make and test a hypothesis.

(Developed for Mathematics and Science, grade 6; recommended for Mathematics and Science, grades 5-7)

00.05.05

The Science of Sound and Musical Instruments, by Joseph H. Lewis

The curriculum unit, "The Science of Sound and Musical Instruments" can be used with students in grades 4-7 with minor adaptations. This unit is one portion of three other units written to discuss the how sound and instruments influence culture. This unit will serve as the science behind sound and will discuss how the instruments introduced in the other units make music or sound.

The paper will be divided into three different sections. Section I, The Structure of the Ear, will focus on how we hear and perceive music. The students will be introduced to each part of the ear and discover how they all work together in order to hear sounds. Section II, The Components of Sound, will introduce students to the concepts which allow sound to occur. They will also discover the role each of these components in producing sound through basic experiments found in the lesson plans at the end of the unit. Section III, How Musical Instruments Create Sound, will explain how the different types instruments mention in the units written by Doreen Canzanella, Judith Dixon and Jackie Porter units create sound.

Upon completion of the unit, the students will be able to:

- (1) Identify the components of sound.
- (2) Describe the relationship between pitch and frequency.
- (3) Explain the terms sympathetic vibrations and resonance.
- (4) Perform simple experiments about sound.
- (5) List the three sections of the ear and the structures associated with each area.
- (6) Explain how musical instruments create sound.

(Developed for Elementary Science, grade 4, and Middle School Science, grades 5-6; recommended for Science, grades 4-6)

00.05.06

The Sounds of Samba, by Rosemarie Crocco Mongillo

The goal of this curriculum unit entitled, "The Sounds of Samba" is to provide both teachers and high school students with instruments to enhance their academic endeavors. Through it we will be delving into some content background of the music, experiencing

the sights and sounds of samba performed, as well as working through a conceptual framework that allows for the investigation of many other topics that might be pursued in a survey course such as World Geography and cultures.

A framework associated with the discipline of Geography, facilitates such a study. It contains two branches: Physical Geography and Human Geography, as well as five themes: Location, Place, Interaction, Movement, and Region. Students may use the framework to focus on only one aspect of their study or to investigate its relationships with other aspects.

This unit is designed to teach heterogeneously grouped high school students. The classes contain not only regular education students who have a variety of learning styles and levels, but also special education students who possess various challenges, both physical and academic. Although this unit is designed to teach high school students, it's adaptable for use with students on other grade levels.

(Developed for World Geography and Cultures, grades 9-12, recommended for World Geography and Cultures, grades 9-12)

00.05.07

The Sound of Music in Kenya, by Jacqueline Porter

I am a special education teacher at East Rock Global Magnet School, where I teach 7th and 8th grade self contained students. We have a multicultural population making our focus on global studies appropriate and essential to teaching diversity.

By researching the history of music from Kenya, I plan to show its importance to the culture. Music is a form of expression, entertainment as well as communication. Sounds we hear can control the frame of mind we are in.

Through collaboration with a team of fellow teachers, I plan to introduce my students to the culture and music of Kenya, while exploring the science of sound. We will learn the importance of music to a culture. We will make instruments and learn how the different shapes and sizes of the same material, creates a variety of sound. After the instruments are made we will learn how to play them.

At the end of this unit, my class will participate in a collaborative effort to present a culminating activity. An assembly called the "Festival of Sound" to be performed at an PTSO meeting for parents and students in the spring of next school year.

(Developed for Social Studies, Science, and Music, grades 6-8 and Special Education; recommended for Social Studies, Science, and Music, grades 6-8)

00.05.08**The Acoustics House, by Eddie B. Rose**

"The Acoustics House" curriculum is a modularized, individualized problem-solving scientific/mathematics activity for students in high school math. Contents of the packets focus on architecture sound and its relationship to science and mathematics. The curriculum is designed to integrate reading, writing, collaboration, science and mathematics. The intended outcome is to enable students to demonstrate and interpret steps used to attain solutions for real life problems.

Students will gain expedience in using the scientific method, solving problems to the best of their ability, and analyzing old and new information. They will receive a variety of guided explanations and demonstrations on problem-solving, along with reviewing basic language skills and learning to monitor their own progress.

Students will also work in cooperative groups as cooperative groups play an important role in school and outside of school. Students will interact and work in small groups throughout each of the activities. Team building and cooperation are important skills' students will need to meet the challenges of our changing world. For some students, working with others will be a new experience. The expected outcome is to develop the skills involved in collaboration and respect for the ideas of others.

(Developed for Algebra, grade 9, Algebra II, grades 10-11, and Geometry, grades 11-12; recommended for Pre-Algebra and Algebra, Middle School and High School grades, and Algebra II and Geometry, High School grades)

00.05.09**Sounding Off About Trig, by Andrea Sorrells**

The unit, "Sounding Off About Trig," takes the overarching theme of sound and applies it to various aspects of algebra and trigonometry. While the unit is designed to supplement a Pre-Calculus textbook, there are parts that may be adaptable to an Algebra II/Trigonometry class. I have created short activities that can be applied in different places of the curriculum. This enables teachers to either use individual activities of this project to enrich a concept or they can use all the activities as a cohesive unit.

Because most students learn best when they can put their hands around what they are learning, the activities are very "hands-on." In one activity students are asked to create a musical octave using bottles. All the activities ask students to use technology or musical instruments. The activities deal with concepts of sine waves including phase shift, amplitude, period, and addition of ordinates. In addition, sound concepts such as frequency, wavelength, and Helmholtz resonators will also be addressed. In any given

activity, both sound and math objectives will be addressed. Thus, "Sounding Off About Trig" asks students to integrate their knowledge of mathematical skills with their understanding of sound.

(Developed for Algebra II and Trigonometry, grades 9-12, and Advanced Functions, grades 11-12; recommended for Algebra II and Trigonometry, grades 9-12, and Advanced Functions and Physics, grades 11-12)

00.05.10

Discovering the Mathematics in Sound, by Lewis L. Spence

Sound, which is an integral part of our environment affects the way we communicate and respond to our surrounding. This invisible form of energy creates an awareness that is almost as noticeable as the effect of light. Most middle school students are little aware of the nature of sound and how the principles of mathematics govern its behavior. This unit is developed to provide these students with a glance at the basic features of sound.

The topic of acoustics further demonstrates how sound can be manipulated to provide desired results for a good hearing environment for speech or music. The interdisciplinary approach to these ideas allows student the opportunity to use mathematics to interpret the science. The primary objective is to create more interest in mathematics as students have the experience of using mathematics as a tool and not in the usual isolation.

The approach should be geared to the performance level of the class - students should have the basic algebraic skill of substituting in a formula.

(Developed for Algebra I, grade 8)

00.05.11

Basic Reading of Sound Words-Onomatopoeia, by Pamela J. Tonge

The following unit will explore the "uniqueness" and "creativity" of sound. Sound is a very powerful element. Sound is a form of energy that makes it possible to hear speech, noise and music. Sound waves are heard by the ears and understood by the brain as noise, music or speech.

This curriculum unit will involve students to listen attentively to the sounds in and around their environment. Communication of sounds has been around for thousands of years. In this unit, students will engage in various and creative assignments/projects of reading and writing of sound words and realize how they form a way of understanding for us to relate to.

In this curriculum unit, a variety of lessons will be presented with objectives and strategies. These lessons are only suggested; it is indeed possible to alter these activities as they pertain to the students you teach. Duration and times for each class, grade or students level, etc. will vary, just as long as you are able to master the objective that is intended. Adding your own touch to any lesson is an added benefit.

Onomatopoeia is a form of communication that displays, in written form, the combination of speaking, reading, hearing and writing a language all its own. Onomatopoeia is used to describe a sound made by an object. It's an imitation of the sound that the object makes or has an association.

Students will have the opportunity to tap into their own imagination and express themselves through reading and writing of this curriculum unit of communication. The students will come in contact to familiar and unfamiliar sound words that will assist them in creating personal and beautifully written masterpieces that they can write and read.

This curriculum unit can be used for many subjects or various topics and themes, just a few are highlighted here.

This curriculum unit is intended for elementary grades through middle school.

(Developed for Reading and Language Arts, grade 6; recommended for Reading and Language Arts, grades K-6)

VI. The Chemistry of Photosynthesis

Introduction

Plants are often the focus of science teaching, beginning in elementary school and continuing through high school. They are familiar, easy to bring into a classroom setting, and can be subjected to various growth conditions in order to teach the scientific method. Plants are also amazing chemical factories, but this is often not appreciated. The focus of this seminar was to provide some answers to the question of how plants make food in the process of photosynthesis. The goal was to develop materials that could be incorporated into the science curriculum of the New Haven Public Schools. My own interest in science stems from my hands-on experiences as a child. Therefore, many demonstrations were included in this seminar. These demonstrations were chosen so that they could actively involve the students and at the same time illustrate many of the chemical processes that occur during photosynthesis.

The book by David Walker entitled *Energy, Plants and Man* was used as the primary text for the seminar. *Photosynthesis* by D.O. Hall & K.K. Rao was used as a supplementary text. The discussions in the seminar largely followed the sequence of topics in Walker's book. The seminar began with a historical discussion of the key scientific advances leading to the understanding that plants use light to convert carbon dioxide and water into sugar and oxygen gas. A demonstration on the production of oxygen gas by plants was done under conditions similar to those used in the 18th century. This was followed by discussions on the nature of light and the fundamental steps by which light is absorbed by plants and converted into chemical energy. Demonstrations of chemiluminescence, lasers and holograms aided these discussions. Plant pigments were discussed next, together with demonstrations on light absorption/emission by pigments extracted from plants and algae, and on pigment separation by using paper chromatography. The process of carbon fixation was discussed and was "photographically" illustrated by making starch pictures on geranium leaves. The role of photosynthesis in the evolution of the earth's atmosphere was discussed along with current concerns over the greenhouse effect and ozone depletion. The seminar ended with a discussion of energy use in the future that included progress in development of systems for artificial photosynthesis and fuel cells.

The curriculum units developed from this seminar are suitable for elementary to middle school students. In all of the units, the science content is integrated with language arts, mathematics and social studies to provide a balanced program that meets the literacy requirements of the New Haven Public School system. The Fellows have prepared extensive lists of materials that can be used in the classroom or as resources. These materials include books that the children can read, textbooks that the teachers can use, demonstration sourcebooks, suppliers of equipment, useful computer software, and addresses of sites on the World Wide Web. Several of the Fellows developed units around a theme or activity related to photosynthesis. These include a fact-finding effort

on the importance of plants to the atmosphere that culminates in a court case over urban development, studies of plants in order to develop urban gardens, and responses to a letter from Mr. McGregor requesting help with his garden. The units include a number of excellent activities that will engage the students' interest and teach them about the processes of photosynthesis. This is especially important for students in elementary school.

I would encourage all teachers of elementary through middle school students to review these curriculum units. These materials provide a valuable resource for incorporating the *Chemistry of Photosynthesis* into the classroom.

Gary W. Brudvig

Synopses of the Curriculum Units

00.06.01

Ph-ocusing on Photosynthesis In and Out of the Garden, by Francine C. Coss

This hands-on, science curriculum unit is written for the study of photosynthesis in grades 1-3. Through the implementation of this unit, one month or more of the academic year will be devoted to the study of photosynthesis. All classroom subjects (i.e.: Language Arts, Mathematics) will be integrated into the science subject matter. Full days will be spent discussing and actively participating in the topics of photosynthesis. A specific section of each day will be devoted to science experiments and activities involving such sub-topics as "Plants and What They Need", "Growing Seeds", and "The Ways of Plants."

(Developed for Science, Mathematics, and Language Arts, grade 3; recommended for Science, Mathematics, and Language Arts, grades 1-3)

00.06.02

How Plants Help Us Breathe, by Roberta A. Mazzucco

The unit "How Plants Help Us Breathe," is an interdisciplinary unit that was written for third grade, but can be used for grades 2 through 5. The unit was prepared with the idea of using it in conjunction with a third grade social studies curriculum on the community. The unit begins by explaining the human respiratory system - specifically the function of the lungs. The comparison is then made to how plants breathe and the function of photosynthesis that takes place in the leaves. The unit discusses the problems of acid rain, global warming, ozone depletion and their affects on the air we breathe. Throughout the unit reference is made to ten hands-on experiments that the students can do. A strong emphasis is placed on children understanding that as citizens they need to try to influence what happens to the environment. There are also lesson plans for a student journal, letter writing to an elected official, and making an environmental poster. Students will also complete a hypermedia class presentation about what they have learned. There is both a teacher, and student bibliography. A list of appropriate web sites and videos are also included.

(Developed for Science, grade 3; recommended for Science, grades 2-5)

00.06.03

Gardens in an Urban Environment, by Luis Recalde

Photosynthesis is at the center of the building and continuation of life in the planet. The process of photosynthesis is essential for the growth of most plants on land and in the

oceans of the world. The growth of plants is key to the maintenance of life on the planet. Humans depend on plants and animals for survival. Photosynthesis is directly connected to the growth of gardens. This curriculum unit is designed for students of the fifth grade elementary level in an urban or suburban environment. This could also apply for any other environment where plants could grow. One of the objectives of this unit is to have students describe and explain the process of photosynthesis. Student will also be able to connect photosynthesis to other fields of science and the disciplines in the curricula of the fifth grade. Students will also plan, design, set up, maintain and evaluate several types of urban gardens in the school environment. Writing, reading, mathematics and social studies are directly connected to the exploration of photosynthesis in this unit. A garden is an effective motivator for students to learn how to love science and how to present their findings in writing and in oral presentations. A science fair project is an excellent vehicle to test our premises and objectives.

(Developed for Science, Science Fair, and Social Studies, grades 4-5; recommended for Science and Social Studies, grades 2-6)

00.06.04

Purification v. Population: Green v. Grey The Plant Kingdom's Impact on Air Quality, by Maureen Taylor-French

Is there new development in your area? If so, will this development contribute to pollution? Are plants the solution? This unit addresses a central question: Can plants erode or minimize the air pollution associated with urban expansion and development?

"Purification v. Population: Green v. Gray" is an integrated science curriculum unit written for grades 6 through 9. The unit is inquiry-based and emphasizes data capture, analysis and validation. This unit is prepared for my eighth grade Integrated/Earth Science class. The unit is written for a group with average skills, although parts of the unit, particularly a CAPT-like laboratory investigation and a court presentation will be received best by more advanced students.

This 12-week unit is divided into three major sections. The first section involves description, analysis and impact of air pollution. The second section involves investigations of the biology and chemistry of plants. Students observe plant processes through experiments and demonstrations. The final piece requires research of a current development proposal-in our investigation-development of the Long Wharf Mall. This section includes substantial research and data analysis. The culminating unit activity will be presented as a court case.

"Purification v. Population: Green v. Gray" addresses National Science Standards and Benchmarks. Furthermore, it embraces the integrated approach to Science and includes

many components of the City of New Haven's Science Standards in grades 7 through 9. Finally, the unit aligns itself with mathematics standards in grades 6 through 9; problem solving is a critical skill employed throughout the unit.

(Developed for Earth/Integrated, grade 8; recommended for Earth/Integrated, grade 8)

00.06.05

Mr. McGregor's Garden, Peter Rabbit, & The Plant-tastic World of Photosynthesis, by Kathleen Ware

Science is a field of studies which all, both young and old, can enjoy. The experiences gained from hands-on activities can lead to a life long love of the field of science. Young children especially benefit from activities that include both literary knowledge and hands-on experiences. When all five senses are engaged in the learning process the results tend to be a more permanent type of learning. The study of photosynthesis lends itself to be an excellent source for the active involvement of the children in the learning process.

In this exciting unit, the children receive a letter from Mr. McGregor, the famous character in Beatrix Potter's classic Peter Rabbit. Mr. McGregor confesses that he has never mastered any gardening techniques. The fame he received in Beatrix Potter's classic for his gardening skills really should have gone to his wife, Mrs. McGregor. Mrs. McGregor has gone on vacation and left Mr. McGregor in charge of the family garden and what havoc he has wreaked on the garden. He has mistaken rocks and pebbles for seeds, cut off roots and stems, deprived the plants of those things necessary for growth such as sunshine and warmth, and has turned portions of the garden into a tropical paradise complete with sand and beach umbrella. Then he notices Peter Rabbit and his friends making off with the remaining vegetables. All these things and the fact that Mrs. McGregor is furious when arrives home and sees the condition of the garden have put Mr. McGregor on a fast course to seek help. Who does he turn to? The children in your class and mine.

(Developed for Science, grade Kindergarten; recommended for Science, grades K-2)

VII. Bioethics

Introduction

The five teachers who signed up for the seminar in *Bioethics* had never before had formal instruction in this field of study. In view of the recent origin of the field, and of its original limitation to medicine, I opened the seminar by outlining my intention to go beyond that restricted definition, and to include also the fields of genetic ethics (which includes both medical and agricultural components) and environmental ethics (of increasing importance). I asked the teachers to purchase two books to give them a background in these subjects, and to orient them as well to ethical theories useful in the analysis of problems we intended to study. These reference books were: *Ethical Issues in Modern Medicine*, by John Arras and Bonnie Steinbock (Mayfield, 1999), and *State of the World 2000*, by Lester Brown et al (Norton, 2000). We devoted the first two weeks to discussion of various ethical theories and their applicability to modern bioethical problems; thereafter we dealt with problems outlined in the two books and, later on, in the current press.

Our sessions were spirited and involved considerable crosstalk. My role was limited to supplying or authenticating scientific information and, most importantly, to the raising of questions for discussion and ethical analysis. The subjects of the completed curriculum units reflect the teachers' original interests as modified by classroom discussions.

Two of the units deal with food. Waltrina Kirkland-Mullins, who teaches first graders at the Davis Street Magnet School, led her students to appreciate the biological sources of the common foods they eat and the bases for an adequate nutritional regime. She introduced bioethical problems by asking the students to compare ordinary agricultural products, cultivated with chemical fertilizers and pesticides, with organically grown products and also with bioengineered crops. Her unit is abundantly augmented with interesting "hands-on" exercises. Richard MacMahon, a Ph.D. who teaches upperclass students at the High School in the Community, examined the genetic engineering of agricultural crops in considerable detail, then analyzed the political, social, economic and ideological controversies surrounding their use in Europe and America.

Lynn Marmitt, a seventh-grade teacher at the East Rock Global Studies Magnet School, summarized modern thought and progress in genetics and cell biology, leading to a discussion of ethical problems associated with the human genome project and the cloning of organisms. Carolyn Kinder, an assistant principal at that same school, provided a summary of ethical theories related to the problem of developing a fair, effective and sustainable medical system for the United States. Finally, Grayce Storey, of the Jackie Robinson Middle School, prepared a unit on the general subject of surrogate motherhood,

emphasizing the different roles played by genetic, gestational and care-giving parents. Much of her ethical analysis was derived from scriptural sources.

After successive revisions, the five papers included in this bioethics volume represent a stimulating introduction to bioethical problems of great current interest, and illustrate how this subject can be included into the curricula of elementary and secondary schools.

Arthur W. Galston

Synopses of the Curriculum Units

00.07.01

Inside Out: An Up-Close Look at Foods We Eat, by Waltrina Kirkland-Mullins

It is intriguing to canvass children in primary grades to discern where they believe foods originate. I asked my first graders about the origins of hamburgers, fries, and cookies. The majority asserted "MacDonalds" or the "neighborhood grocery store." To my surprise, too large a number of students made no connection between these foods and animal/plant origins.

Listening to student responses motivated me to develop "Inside Out: An Up-Close Look At Foods We Eat." It is an interdisciplinary curriculum unit that encompasses Math, Science, Social Studies, and Language Arts using a hands-on approach. "Inside Out" is targeted at students in Primary Grades 1 and 2.

Based on the expectation that children ages 6-7 are sophisticated enough to grasp scientific terminologies and related concepts, particularly when presented on a hands-on basis, "Inside Out" will (1) provide students with a better understanding of the origins of food and the food chain; (2) motivate students to make healthy, nutrition-based choices when selecting foods, (3) spark enthusiasm in understanding the inner workings of the human body, and (4) will lay the groundwork for consumer activism and motivate students to explore the wonderful world of Science.

(Developed for Science, Social Studies, and Language Arts, grade 2; recommended for Science, Social Studies, and Language Arts, grades 1-2)

00.07.02

Genetic Engineering of Crop Plants, by Richard R. MacMahon

This unit is designed to acquaint students with the concept of genetic engineering and the biological and ethical implications involved. It will also help students understand the interplay between science, government, and the citizen, and the ethical problems involved in trying to feed the entire world population. The students will learn what genetic engineering is, how it is accomplished, and the biological problems involved. The students will also learn why there is such an ethical protest against genetic engineering and the resulting political and social consequences. The unit discusses both the biological and political aspects of genetic engineering. The process of genetic engineering is explained and the associated problems are discussed. The justification for genetic engineering is also considered. The political aspects include both the nature and methods of the large number of protests against genetic engineering. The validity of these protests is also discussed. The technology is considered in light of its impact on humans and their

cultures, both in the developed and third world countries. Finally there are several simple laboratory exercises to illustrate the phenomenon of genetically engineered crops.

(Developed for General Biology, grades 9-10, and Advanced Biology and Human Biology, grades 11-12; recommended for General Biology, grades 9-10, and Advanced Biology, Genetics and Evolution, and Bioethics, grades 11-12)

00.07.03

Brave New World: Genetics in the Modern World, by Lynn Marmitt

The discoveries made over the past twenty years especially in the area of biotechnology are extraordinary. Right before our very eyes biological advances have transformed science fiction into science reality. Continuous research and constant determination have made it possible to clone a mammal, identify genetic flaws and map the entire human genome. The media addresses this, almost on a daily basis, in newspapers and magazine articles.

The unit I developed, "Brave New World: Genetics in the Modern World," provides a basic background of genetic concepts as well as information pertaining to some of the current research and developments. The document contains a student glossary and some innovative hands-on exercises.

(Developed for Integrated Science, grade 8; recommended for Integrated Science, grades 7-8, and Biology, grades 6-9)

00.07.04

Bioethics and Effective Health Care, by Carolyn Kinder

The purpose of developing this unit on bioethics is to make teachers aware of the characteristics and strategies used in developing a fundamentally rational, ethical, and economically sound medical system. These strategies can then be applied in resolving ethical issues in conflict. The unit will present the opportunity for teachers to engage students in moral knowledge and integrity that can and should be nurtured along with content knowledge. This will help students to become critical thinkers.

As a result, this will better help students move from a single-minded view of self towards a vision of the self in relationship to the needs of others in this world. Hopefully, this unit will raise the level of awareness in helping teachers and students face, evaluate and make hard choices now that will benefit society later. In addition, analyzing problems on ethical issues and conflict that represent life will provide a level of knowledge and comfort and make the real dilemmas less threatening.

The unit is designed for grades 5-8 and will consist of knowledge content, lesson plans, student resource list, teacher resource list and a bibliography. Science: Content Standards 5.0 and 6.0 will be used. Science Content Standard 5.0 deals with technological science which states that students will develop abilities necessary to distinguish between naturally occurring objects and those of human design, and they will develop understanding of the roles of science and technology in contemporary society. Science Content Standard 6.0 Ecology states that students will develop an understanding of personal and community health; of the characteristics of changing populations; of the ecology and uses of natural resources; of changes in environments; and of the use of science and technology in addressing present-day local and global challenges.

Student Performance Standards 5.1, 6.1 and 6.2: Students will develop an understanding of technological designs, changing population and ecology, and which problems can be solved or improved through scientific information or the development of a new product or process; (2) students will develop a proposal which solves or improves a problem through a new product design or procedure; (3) students will implement the proposed new design or procedure for the improvement or demand a higher quality of life for all; (4) students will understand that all technological solutions have trade-offs or consequences which affect our environment or quality of life; and (5) students will understand that some consequences are predictable and some are not and improve the quality of life. All of these objectives are directly related to the Connecticut Mastery Test (CMT). Teachers using the unit can assess students by using portfolios, tests, written, and oral evaluations.

(Developed for Science, grade 7; recommended for Science and Social Development, grade 7)

00.07.05

Ethical Problems Surrounding Surrogate Motherhood, by Grayce P. Storey

A surrogate mother is a woman who carries a child, usually for an infertile couple. My students' primary focuses are the moral issues. This unit will be taught in an 8th grade science class, but can also be used in a health and civics class. Addressed in this unit are moral issues of surrogate motherhood. The areas developed are: 1) what is surrogacy and the types of surrogacy; 2) who should and should not be a surrogate and is surrogacy for you; 3) religion - from a Christian point of view, how surrogacy is perceived; 4) surrogacy and the law - an informative tool used to bridge the gap between surrogacy and the law. Included in this unit are: ethical issues, vocabulary list, resources, lesson plans, reading list, and bibliography.

(Developed for Earth Science, grade 8; recommended for Home Economics, grades 8-12, Civics, grades 9-12, and Science, grades 7-12)