

Time to Learn

*How to Create High Schools That
Serve All Students*

Second Edition

George H. Wood

HEINEMANN
Portsmouth, NH

Heinemann

A division of Reed Elsevier Inc.
361 Hanover Street
Portsmouth, NH 03801-3912
www.heinemann.com

Offices and agents throughout the world

© 2005, 1998 by George H. Wood

All rights reserved. No part of this book may be reproduced in any form or by any electronic or mechanical means, including information storage and retrieval systems, without permission in writing from the publisher, except by a reviewer, who may quote brief passages in a review.

The first edition was published by Penguin Putnam Inc.

Library of Congress Cataloging-in-Publication Data

Wood, George H. (George Harrison)

Time to learn : how to create high schools that serve all students / George H. Wood.—2nd ed.
p. cm.

Based on the author's observations and experiences as principal of Federal Hocking High School.
Includes bibliographical references and index.

ISBN 0-325-00808-6 (alk. paper)

1. High schools—United States—Administration—Case studies. 2. High school principals—
United States—Case studies. 3. School improvement programs—United States—Case studies.
I. Federal Hocking High School (Stewart, Ohio). II. Title.

LB2822.2.W66 2005

373.12'00973—dc22

2005012144

Editor: Harvey Daniels

Production editor: Sonja S. Chapman

Cover design: Jenny Jensen Greenleaf

Compositor: TechBooks

Manufacturing: Louise Richardson

Printed in the United States of America on acid-free paper

09 08 07 06 05 VP 1 2 3 4 5

Contents

<i>Foreword by Theodore R.Sizer</i>	<i>ix</i>
<i>Preface to the Second Edition</i>	<i>xi</i>
<i>Introduction: Democracy’s Finishing School</i>	<i>xix</i>
Book One: Life in High School	1
Introduction: The Purpose of High School	1
Chapter 1: Five Thousand Hours	8
Chapter 2: Starting with Kids: The Case for Community	30
Book Two: Transforming the High School	47
Introduction: Reaching Every Student	47
Chapter 3: Getting to Know Kids: The Power of Personalization	50
Chapter 4: Teaching Important Things Well	78
Chapter 5: Democracy—It’s Not Something We Learn About, It’s Something We Do	124
Book Three: Creating Change	141
Introduction: The Difference We Make	141
Chapter 6: Making It Happen	148
Chapter 7: Building a Community of Hope	170
<i>Appendix: Resources for Change</i>	191
<i>Index</i>	205

Chapter 1

Five Thousand Hours

For nearly two decades Americans have been deluged with numbers about high schools. Test scores, dropout rates, money spent (or not spent), teacher-student ratios, and on and on. From this parade of numbers a wide array of “experts” on education have tried to draw a recipe for fixing the American high school. We’ve been fed a steady diet of new tests, plans for school choice, new certification requirements for teachers—one quick fix after another, all in the name of changing the numbers. The problem is that the numbers are not the problem. Like a physician who confuses lowering a temperature with curing a disease, Americans are looking in the wrong places for how to improve our high schools.

The real issue confronted by the American high school is how to change the day-to-day experience of students so that they are connected to the academic and social agenda of the school. This means creating, nurturing, and sustaining a school community where every young person feels valued. It means doing more than nudging up test scores or requiring teachers to attend one more workshop, fiddling with an occasional new textbook series, or making school uniforms mandatory. If we are to get serious about having the high schools that our children and communities deserve, we must rethink the entire culture of high school in our attempt to make it a place where young people can develop the habits of heart and mind that are required of citizens in a democracy, or, to put it another way, moving from the institutions we have to the communities we want and need.

To do this we must take on the central issues in rethinking our high schools: student disengagement, an incoherent curriculum, and kids who feel anonymous. Reinventing our high schools, moving them from institutions to

communities, means making them places where young people are challenged and engaged; where young people understand what they study and why, and where they have a sense that they belong and can make a difference. We must start where any honest discussion of schools must start—with the experience of the students. For all our talk about improving schools, this is the only real issue that matters: What is the daily experience of high school like for our kids? Does that experience cause young people to do their best work possible? Does it prepare them for a life of engaged and productive citizenship?

In my first year as principal, after twelve years as a university professor, I relearned what it means to teach high school. What struck me most was how many teachers went home exhausted and came to school already behind in their preparations for the day. Working side by side with a group of dedicated but overwhelmed teachers, I came to see that something about high school was deeply wrong—something that wasn't reflected in test scores but showed up clearly in the worn expressions of our teachers.

It wasn't just the work lives of the teachers that rang warning bells. When I watched our students make their way through the school day, a more pressing case for rethinking how we do high school emerged. The daily life of our students presented us with a paradox. On one hand, it was fairly easy to “slide” through the day, doing minimal work, just getting by in class. On the other, it was almost impossible to do quality work in all areas as students were herded through eight classes a day, in forty-two-minute chunks, with two-minute breaks. It was as if we had intentionally designed a system to *prevent* learning rather than promote it.

Additionally, it seemed as if no one felt as if they were in control of what was happening to them. Students saw their role as that of a passive consumer—take what is given to you, give it back on a test, and move on. They responded by either buying into the trade (passive compliance for good grades) or rebelling out of boredom. Teachers felt even less in control; with no power over their schedules, workload, or even the curriculum, they too reacted like the students, some trying to do their very best against overwhelming odds, others just doing what it took to get by. With no one feeling in control, everyone felt justified in blaming “the school” for any and all failures. To take responsibility for a system that ignores you would be unreasonable. But this lack of control and responsibility did little to model to our students what it means to be a powerful adult.

This is not to say that nothing was going well in our high school, or in the classrooms of high school teachers around the country. In fact, brilliant lessons often went on, only to be cut short by the changing of classes, and students often did outstanding work, even if it meant doing less competent work

in another class or subject.⁴ The problem was that most of this work went on *in spite of* how the school was structured rather than because of it.

The daily reality of how school worked (or didn't work) was what caused our teachers, students, and community to begin asking some serious questions about our school. Did we really believe that a teacher could actually teach more than 145 children a day, prepare effective lessons for six or seven different classes, and provide adequate feedback on literally scores of student papers? Did we really think young people used their minds well when confronted by six to eight different subject areas daily? Did learning really take place in forty-two-minute chunks, with two-minute breaks to use the toilet and a twenty-seven-minute lunch break to meet friends and catch up on the gossip of the day? Did every subject we taught really need the same 120 hours of instruction yearly? Most important, did organizing a school around clocks, bells, credit hours, and grades really prepare young people to become citizens, employees, and neighbors?

Questions like these caused my colleagues and me to begin rethinking many of our automatic assumptions about how our high school operated. Along with teachers, administrators, parents, and students at scores of high schools across the country, we found ourselves face to face with one central question: is our high school organized so that our students can do their best possible work and become the adults our community needs? Quality student work is what must be at the center of how we organize our schools; after all, the work our students do is the only reason we have schools. But so much of the way we set up high school seems to work against young people using their minds well to do quality work. So much of what we do is built around the *institution* of high school. What we wanted instead, we knew, was to create a *community* of learners.

In the pages that follow I draw from my experiences at a school that has worked hard to rethink itself, as well as from the experiences of others, to argue for a different way of making high schools work. What is presented is not a panacea, as different schools require different programs. Like children, schools have their own personalities and needs, and attempting to raise them all in the same way would be a horrible mistake.

What is presented is also not easy. A host of skeletons make it difficult to clean out this closet. There are state laws that insist the high school curriculum be doled out in chunks of 120 hours. University programs for the preparation

⁴ The first of Ted Sizer's three outstanding books on school reform, *Horace's Compromise* (Boston: Houghton Mifflin, 1984), gives an excellent description of how teachers accommodate current school structures.

of high school teachers continue to focus on developing content-matter specialists who know little about the whole child or school. A public mind-set has been so conditioned as to what high school should be that it is hard to convince parents, the general public, and even educators that we could do high school any other way. Colleges and universities say they want school reform, yet continue to ask for high school transcripts that reflect the very school structures they claim to want changed.

Current conditions also work against the changes I believe are necessary if our high schools are to become places of meaning for all our young people. More and more states are moving to a single exit exam that students must pass to graduate. The federal legislation known as the No Child Left Behind Act measures the success of any high school on the basis of a standardized test in reading, math, and science. In the face of such pressure it is easy to teach to the test. School after school has eliminated nonacademic areas (such as arts), resorted to “drill and kill” exercises to replace hands-on learning opportunities, and literally “dumbed down” their curriculum to focus on the right answers for the tests.

We have a great deal to do in both changing the public perception of high school and stemming the tide of tests washing over our kids. More will be said about this later, but in the meantime I think it is important to point out that in spite of all this, my daily work at Federal Hocking High School and my observations of the work of other committed high school educators leave me convinced that we can rethink the American high school experience. We can make our institutional high schools into genuine learning communities. But to do that requires not merely *reforming* the institutional high schools we have now. If we are to help our children learn to use their minds well, we must *transform* our high schools into learning communities. By doing that we can make the five thousand hours that high school students spend in school one of the most meaningful experiences of their lives.⁵

At 7: 15 A.M. every Monday through Friday from late August to early June a large yellow school bus pulls up to the high school bus stop in front of the Amesville Elementary School and opens its door. Onto bus number six file about a dozen kids, some still munching on a hasty breakfast, others barely awake, one or two busily copying the homework they forgot the night before. The bus swings out of the school lot and follows the winding lanes of Ohio State Routes 550 and 329 toward the old frontier town of Stewart. Along the way the driver stops several times, warning flashers on, to pick up a few dozen more kids, ranging in age from

⁵ While the primary focus of this book is high school, I believe the lessons in it are easily applied to middle and elementary schools as well. In a previous book, *Schools That Work* (Penguin, 1992), I discussed elementary and middle school education in more detail.

fourteen to nineteen. The new passengers grunt in greeting and make their way to their seats, the same seats that by habit they sit in every day, glaring at anyone who might have mistakenly sat in another's chosen place.

The ride is not too long, only twenty-five minutes or so, just long enough for a nap or some gossip about who is dating whom. In that respect these kids are lucky (other students ride the bus for more than an hour), so they don't complain much about the ride or hassle the driver. At the end of the trip the door of bus six swings open, depositing its now full load of strangely quiet and still sleepy adolescents at the door of Federal Hocking High School (FHHS). Named after the confluence of the Hocking River and Federal Creek, Fed-Hock High (as it is often shortened) stands silently awaiting these first occupants of the day. Dozens of other buses and scores of cars fill the parking lot until, when the first class starts at 7:50 A.M., nearly four hundred kids in all shapes, sizes, and colors fill our building.

This same scene is repeated in every state of the Union. Every county, town, village, and city provides a free high school education to all comers. It matters not whether a young person is male or female, black or white or brown, rich or poor, physically whole or impaired, we bring them all to high school. The kids that walk up the front steps of FHHS are welcome to walk in the doors of the high school wherever they might live. But, of course, just opening the doors is not enough. Having guaranteed that all can attend, we must make sure we spend wisely the time our students have with us.

Because of the way high school calendars and schedules are organized, we usually do not think of a student's total time spent in high school when considering what schools should be like. Rather, we think of one year (freshman, sophomore, junior, or senior) or one subject (algebra, English, industrial technology) as defining a high school experience. It is precisely that way of thinking, the breaking apart of the school day as opposed to the pulling together of the total high school experience, that prevents us from rethinking how to more effectively use the time our children spend in school. We devote so much effort to tinkering with the pieces of the high school experience that we have little effect on the whole. But it is the entire experience that students have, not just individual courses or grades, that makes them high school graduates.

Compare our ways of thinking about high school to the construction of a jigsaw puzzle. Both have pieces that lead to a finished product. With a jigsaw puzzle we start with the finished product—the photograph of a painting, a landscape scene, or some other interesting design. We then disassemble that picture, taking care that each piece will fit with the others to create again and again the picture we see on the box.

Now consider how we put together a high school program. Indeed, most schools start with some general, quite bland statement about well-rounded,

well-informed students. But the statement is promptly forgotten as we turn to the little pieces of a child's education. The school is broken up into individual units which we call courses, and each of these units vies for time in the student's day. Usually this means that the individual units have little if anything to do with one another. So the English teacher in first period is unaware of the health report being written in second period, for example.

In effect, what we do in organizing a high school program is spend tremendous effort on the size, shape, and color of the individual pieces of the jigsaw puzzle while the teacher or teachers working on each piece have only the most general idea where their piece fits in the finished puzzle. It is, at best, left to the student to figure out how to make the pieces come together, perhaps within the framework of a college or technology preparatory curriculum. At worst, this way of looking at high school cuts the student adrift to just fill up a schedule as a way of killing time.⁶

If we could change our thinking about high school, if we could consider the entire school experience vis à vis the picture or graduate we want at the end of the experience, we could then move on to make the changes necessary in our high schools. The changes we need to make are not to be found in tinkering with the parts; rather, they require rethinking the very assumptions that guide how we organize the time our kids spend in school.

I've referred several times to the five thousand hours students spend in high school. To begin our exploration of how best to organize our schools, let's start by examining how this time is currently utilized. Until now I have spoken of the need to restructure the high school experience as an article of faith. On examining what we currently do with the time allotted for high school, the case for restructuring becomes all too clear.

First, the big picture: Over a four-year period students in American high schools come to school for an average of 180 days, seven hours a day. A little simple math and we find that this equals just slightly more than five thousand hours of a young person's life.⁷ How do we spend this time? On average, roughly a thousand hours are devoted to such things as lunch and time to walk from

⁶ Having been a professor for more than a decade before coming to FHHS, I know most colleges and universities are at least as unthoughtful as high schools (if not worse) when it comes to undergraduate curriculum. Undergraduate programs make little sense to students who choose electives from broad lists that have little to do with their career paths or broadening their cultural or intellectual horizons.

⁷ National figures on time spent in school can be found in *Prisoners of Time: Report of the National Education Commission on Time and Learning* (Washington, DC: U.S. Government Printing Office, 1994).

class to class (known as passing periods). That leaves some four thousand hours of instructional time, which is broken down into units of 120 hours each, or about thirty-two units in the course of four years.⁸ At first glance one may be impressed by these numbers. University students average eight to ten courses a year; kids in high school take a similar course load. Their seven-hour school day is slightly shorter than an eight-hour workday, with kids spending about 5.6 hours a day in the classroom with added time for homework at night.

So far, so good. But this is only looking at the pieces of the puzzle. They may look fine in isolation, but fit them together and the picture makes little, if any, sense.

Begin with the number of credits required for graduation. At our high school, for example, until 1996 we required students to amass twenty credits for graduation. That is, they had to pass an average of five courses a year to earn their diplomas. In this respect we were similar to most schools in Ohio and to those around the country that have students meet state-mandated graduation requirements. However, we were not happy with this way of looking at high school completion, for several reasons. First is the simple fact that requiring only twenty units for graduation means that students need to pass only two-thirds of the courses they take. Back to our hours per unit, twenty units equals only 2,400 of the 4,000 academic hours kids spend in school. In other words, the message is that a student may do little or nothing with 1,600 of the 5,000 hours he or she spends in school and still earn the title of high school graduate.

Look closely at this big picture and more surprises await you.

It takes twenty units to graduate, but twenty units of what? As it is similar to most states, Ohio's list of required credits is a good example of what courses the aspiring graduate must take. Specifically, Ohio law requires students to complete four units of English, three units of math, three units of social studies (including $\frac{1}{2}$ unit of American history and $\frac{1}{2}$ unit of American government), three units of science, $\frac{1}{2}$ unit of PE, $\frac{1}{2}$ unit of health and six additional nonspecified elective units (for year 2007 and beyond). That's it. Meaning that just more than twelve units, or some 1,440 hours of student time, are required in specific courses for a student to graduate from high school. Said another way, the core academic curriculum for a high school student may take up slightly more than a quarter of the total time he or she spends in high school. When we allow ourselves to look at just the pieces, the good English or tough chemistry course our child is taking, it's easy to be satisfied with this state of affairs. But pulling back, looking at the whole picture, we become frustrated by the sense that the young

⁸ The picture is somewhat more complicated than 120 hours equaling one credit. For example, in Ohio 120 hours of Physical Education class equaled $\frac{1}{2}$ unit.

people being handed diplomas have spent so little of their precious time on the intellectual skills and concepts we claim to value (see Figure 1–1 below).

It was frustration with this state of affairs that led our faculty, as it has many others, to begin rethinking how we organize our school. But it wasn't just the low expectation of how much work it takes to graduate that goaded us on. Once we stepped back to look at the total high school picture, we also became aware of how disjointed and uneven the high school experience can be.

Go back a bit and look again at the list of requirements for graduation. Now remember that each unit equals 120 hours of class time. A bit of history here is useful in understanding why 120 hours equal one unit. The unit in question is known as the Carnegie Unit. It was back in 1893 that the National Education Association, then an organization of school administrators, appointed a committee to study creating uniform high school standards that would lead to college admission. Among the recommendations of the Committee of Ten (as it had come to be known) was that an academic unit be uniform from high school to high school. It was their recommendation, more than a century ago, that these units consist of 120 hours of class time.

Of course the Committee of Ten had no legal authority to impose this requirement. However, in 1910 Andrew Carnegie's charitable trust, the Carnegie Foundation for the Advancement of Teaching, made an offer to colleges that would dominate the way high schools are organized to this day. The offer was simple. The foundation would fund college professors' pensions

Graduation by Credit

The following is a sample four-year schedule that students could follow to graduate from most high schools if they took only the required courses.

9 th Grade	10 th Grade	11 th Grade	12 th Grade
English (1 unit)	English (1 unit)	English (1 unit)	English (1 unit)
Civics (1 unit)	U.S. History (1 unit)	Social Studies (1 unit)	
Biology or Earth Science (1 unit)	Biology or Earth Science (1 unit)	Science (1 unit)	
Math (General Math or Algebra) (1 unit)	Math (1 unit)	Math (1 Unit)	
PE (1/4 unit)	Health (1/2 unit)		
Electives * (3 units)	Electives * (3 units)	Electives * (4 units)	Electives * (7 units)

*Remember that out of the eighteen possible electives students only have to pass six. Most students opt for at least one study hall period each year.

Figure 1–1.

if (among other criteria) college admissions were based upon high school students' having completed sixteen set units. And each unit was to equal 120 hours of instruction—or what we know today as the Carnegie Unit. While we would never settle for driving a car made in 1910, or running a factory at 1910 productivity levels, or even being supplied water from sanitation facilities that meet 1910 health standards, we still expect our kids to earn school credits based on an accounting system developed at the turn of the century.⁹ (One more note, the commission arrived at the 120-hour total as they had 120 days in the school year at the time. Thus, one hour a day times 120 days equaled a credit.)

Whether or not 120 hours of seat time spent in a classroom add up to having actually learned something is a question to which we will return later. Note, however, that this system of accounting fragments what young people study in high school. Given a mandate that 120 hours equal one unit, high schools do the logical thing: they divide the 120 hours by the number of school days in a year (around 180) and come up with the simple conclusion that each class should meet for approximately forty minutes a day. The school day is then broken into anywhere from eight forty-minute periods to six fifty-odd-minute periods and instantaneously the accounting problem is solved. Rather than discuss what should be learned in algebra to equal a high school credit for graduation, the issue becomes just ensuring enough time spent in the math classroom to fulfill the 120-hour criterion.

Consider for a moment the way such a system hands out knowledge. Assume an eight-period day for most students. This means that in the course of just one day a student may be faced with learning English, math, U.S. history, biology, French, music theory, and typing, all in discrete, time-divided blocks. There is no formal mechanism for any of these subjects to be tied to any others, though enterprising teachers may find connections on their own. Imagine how difficult a task this intellectual juggling would be if we really expected students to do high-quality work in each of these areas.

One student raised this very issue with me during a conference we had about what his teachers perceived to be his lack of effort in class. “You know, Doc, I work harder than the teachers do, actually.” A bit taken aback by this comment, I asked him to elaborate. “Well,” he continued, “how many different courses a day do teachers teach?” “Seven,” I replied. “But some of those are the same course. How many *different* courses per day?” I checked the schedule and, on average, our teachers had three different preparations. “Well, I have eight separate classes that I am supposed to be ready for every day. Right now I’m

⁹ A detailed history of the Carnegie Foundation's effect on public education can be found in Henry J. Perkinson, *The Imperfect Panacea*, 4th ed. (New York: McGraw Hill, 1995).

getting As in three of them, Bs in two, one C, and only failing two classes. Come on, Doc, I'm passing seventy-five percent of my classes—not bad, really.” While I was not convinced that he worked harder than our teachers, it is true that he worked hard at more separate tasks than most of us ever face after high school.

The important point here is not whether students work harder than teachers. It is instead that we ask kids to do something most adults need never do—learn and use academic content and skills in discrete, disconnected blocks of time—all for the sake of earning Carnegie Units. At very best, this system would produce a young person who knows a little bit about a lot of things. At worst, it produces young people who memorize bits of information for examinations, information quickly forgotten because it is never required again in any meaningful context. This may be a good strategy for preparing masters of trivia games. It is a lousy way to prepare citizens and neighbors.

A low level of expectation and a fragmented educational experience—certainly these are reasons enough to rethink how we spend our kids' five thousand high school hours. Yet even within this system some kids have a good high school experience. They leave able to write well, show a good sense of history, handle complex math formulas, and perform scientific inquiries. It is the fact that only *some* kids leave so well prepared that raises one more reason to be concerned with the way we spend our children's time in high school.

Within the structure of credits for graduation hides the unfortunate truth that there are huge differences from student to student in what counts as a credit. Take, for example, the English credit. For students whom we identify as college material we organize a “college prep” curriculum where these students will read Hemingway, Shakespeare, Angelou, and Keats; write essays on symbolism, culture, and voice; and use the library to prepare research papers on war and peace, capital punishment, and the lives of great authors. For the rest of the students, who we guess will not grace the halls of the university, the same English credit is earned reading autobiographies of sports stars, writing business letters, and visiting the library only to find a magazine article on a topic of interest. The best that can be said of such a program is that it is designed to “meet the needs” of each student. However, it also greatly limits the range of skills some students get from school. Multiply this across all the curricular areas—some students get Algebra and Geometry while others get General Math, some take Chemistry and Physics while others take General Science, some take Advanced Placement Western Civilization while others take Great American Sports Heroes—and it becomes clear that even within the credit structure there is no standard high school curriculum.

All of this, the way we use time and the way we organize curriculum, leads to another set of unfortunate circumstances—the passive role students play in the process. For the most part, high school students spend their time

sitting and listening. Teachers, faced with mountains of material to cover and very little time to cover it, resort to lecture to try to hit the high points. When students tell us they are bored and that the curriculum is incoherent to them, it is to this that they are referring. You cannot understand what you do not experience in context. But because we have decided to break curriculum into small, disconnected bits and attempt to cover more information than is reasonably possible, school seems to most students to be a never ending listing of stuff to jot down, memorize, feed back on a test, and forget.

It is not hard to see why teachers, parents, and students who are serious about what is learned in high school want to rethink the way things are currently done. When we look at the fragmentation of the day into credits or units, the multiple tasks at which we expect kids to excel, the unevenness of the curriculum that various young people experience, and the passivity of students, it should be clear that what is needed is an overhaul of the entire system.

This overhaul is not only in the name of what kids learn, it's also focused on who we want them to become. Passivity and low expectations are not only the enemies of learning, they are also enemies of democratic life. A democracy requires that its citizens be engaged, think for themselves, be willing to take action, and tolerate ambiguity. When the final part of a young person's public education is to passively consume sometimes trivial information, they are not learning what it means to be a self-directed thinker and citizen.

It was stepping back and looking at the total high school experience that caused the faculty at FHHS to reconsider how our high school is organized. As with our colleagues in many other high schools, ours was not a theoretical discussion like those that often take place in statehouses or universities, far removed from the day-to-day life of the high school experience. Rather, we began with what we know best, the daily experiences of teachers and students in our own school. When we looked at what a school day was like, at how it limited what students learned and their relationships with teachers, we knew it was time to do something very different.

To bring that picture into closer focus, I'm going to share with you a typical day at our high school before we began to change the way we work (see Figure 1–2). Follow students Sharon McMullins, Jake Delone, and Nina Mitchell and teachers Reba Theiss, Leon Talbert, and Donna Bennett from class to class as they try to teach and learn in an eight-period day, the schedule we ran in the 1992–1993 school year and the schedule most high schools run today.¹⁰ While you might not be surprised, you should be disappointed by the system we've created for our children.

¹⁰ All of these individuals are composites and their names are invented.

Eight Periods: On Your Mark, Get Set, Go

We will follow these teachers and students through their school day. To help you follow along, their complete daily schedules are reproduced here.

Teachers

		Reba Theiss	Donna Bennett	Leon Talbert
Homeroom	7:30–7:37	Homeroom	Homeroom	Homeroom
First Period	7:40–8:23	Biology 2	U.S. History	Algebra 1
Second	8:26–9:09	Planning Period	U.S. History	Algebra 1
Third	9:12–9:55	Biology 1	Practical Law	Remedial Math
Fourth	9:58–10:41	Biology 1	U.S. History	Planning Period
Fifth (Includes lunch)	10:44–11:57	Biology 1	Planning Period	Pre-Algebra
Sixth	12:00–12:43	Chemistry	Practical Law	Pre-Algebra
Seventh	12:46–1:29	Biology 2	Ancient Cultures	Algebra 1
Eighth	1:32–2:15	Physics	U.S. History	Pre-Algebra

Students

		Sharon McMullins	Jake Delone	Nina Mitchell
Homeroom		Homeroom	Homeroom	Homeroom
First Period		U.S. History	Mythology	Algebra 1
Second		Drama	PE	Spanish 1
Third		Spanish 2	Study Hall	Civics
Fourth		Geometry	Parenting	English
Fifth		Health	PE	Biology
Sixth		Biology 2	Study Hall	PE
Seventh		Study Hall	Consumer Math	Study Hall
Eighth		Band	Industrial Technology	Typing

Figure 1–2.

Monday morning, 7:00 A.M., at Federal Hocking High School. Reba Theiss and Donna Bennett are in their classrooms making last-minute preparations for the seven classes they will teach over the next seven hours. Reba will begin with a Biology Two class, followed by a forty-minute planning period. She'll then have three Biology One classes and finish the day with

Chemistry, Biology Two, and Physics classes. Donna will teach four classes of American History, two sections of Practical Law, and one section of Ancient Cultures.

At about 7:20 Leon Talbert comes in. While teachers do not have to report until 7:30, Leon, like Donna and Reba, likes to beat the kids through the door. The peace and quiet gives him a moment to recover from racing around his home getting his two preschoolers ready for their day. In the time he has, he checks through his folders to make sure he has graded and recorded the seven sets of homework papers from his three sections of Algebra One, three sections of Pre-Algebra, and one section of Remedial Math. Sometimes he finds he missed more than a few of the assignments he tried to grade between nine and midnight.

The day starts early for Sharon McMullins, Jake Delone, and Nina Mitchell as well. Sharon's bus picks her up at 6:50, Nina's at 6:45. Jake drives, but he tries to get to his girlfriend's house by 7:00 because his future mother-in-law always has breakfast ready for him. Sharon is out of bed by 6:00, planning on nearly an hour to shower, put on her makeup, and do her hair. Breakfast is not included in her morning routine. Nina, on the other hand, rolls out at 6:15, plenty of time to comb out her straight hair and munch on some bagels and cream cheese while reading one of the novels she always keeps nearby.

This Monday Jake is well rested. The Sunday night football game on television was a blowout and he fell asleep at 10:00 with the TV still on in his room. This was unusual for him, however, as he is usually up until 1:00 A.M. or so, figuring on plenty of time to catch up on his sleep at school. Nina, as is usual, heads for the bus well rested. Too young to have a part-time job and not involved in any activities at school, she is usually in bed by nine, spending an hour reading herself to sleep. Sharon arrives at the bus stop just on time, her eyes bloodshot as they often are on Mondays from not enough sleep. A member of the marching band, she spends her Friday evenings at football games and her Saturdays at competitions. She sleeps in on Sunday morning and it is only by Sunday evening that she finds the energy to tackle her homework—a task that usually keeps her up until the late hours.

By 7:30, Sharon, Jake, and Nina have made it to school, Jake always slipping in the door just as the first bell sounds. That bell signals to Reba, Leon, and Donna that it is time to take attendance (a task they'll repeat seven more times) and read the morning announcements to their homerooms. For seniors, like Jake, announcements include the ordering of cap and gown and plans for the class trip; most of the homeroom dozes. Sophomores like Sharon pay a bit more attention as the announcements include testing dates and plans for the dance on Friday.

Nina, like most freshmen, listens to all the announcements closely, having not yet installed the filter that will soon begin to screen out many of the least relevant items. The teachers find themselves mentally doing other chores while attending to the homeroom monitoring. This time doesn't really feel like a class, the kids are only there for seven minutes, and it is a new set of kids each year. Leon wonders why the time couldn't be better spent, even just adding a minute to each class, as he slips out to get to the office to copy a set of handouts he forgot for the Pre-Algebra classes. Reba and Donna also do not find much useful in the homeroom period, but there's always been one, and at least this way attendance can be taken by grade level.

At 7:37 the bell rings again (it will ring twenty more times in the next six hours and forty minutes) and the three-minute dash to first period begins. Reba, Donna, and Leon all know they should be out in the hall during passing time, but it doesn't always work that way. Today Reba wants to spend every available minute getting the Biology Two dissection lab set up. Since classes meet for only forty-three minutes, every second counts.

Last Friday the students were briefed on the cow heart dissection they would do, assigned a lab partner, lab table, and equipment, and given the lab assignment sheet. Reba knows she'll have to remind at least half of the seventeen students which lab table they are assigned to, and she has enough extra lab sheets to replace the ten or so that will be left in lockers or with other books. She's always frustrated by the number of students who forget materials, and she knows that it would teach them responsibility if she made them go back and get their materials. But with so precious little class time, that lesson is forsaken for the larger academic lesson that needs to get started the moment the bell rings. Of course, while she scurries to get the final touches on the lab set up, she doesn't notice the homeroom attendance form sitting on her desk which she forgot to send to the office. The oversight will cost her precious minutes of her first-period class, when she is interrupted twice by office personnel who come looking for it.

Leon and Donna meet after the homeroom bell at their usual place—the locker area between their classrooms. Here they start their daily ritual of keeping track of the FHHS romances. Jake gets there first, slipping out of the library where his homeroom meets a minute or two early so he can be waiting for his girlfriend at the locker they share. When Maria shows up, they lock arms and wander out of the teachers' gaze to steal kisses that belie the fact that they have only been apart for less than ten minutes. Sharon and Nina just casually drift through the lockers.

They both shoulder book bags that weigh more than thirty pounds as they carry all their books and assorted necessary materials—magazines, makeup, address books, combs, curlers taken out on the bus, and gym clothes.

It is quite a load, but with only three minutes between classes they would rather spend the time talking with friends than sorting through a locker. Gathering up two or three companions, each of them heads off in the direction of her first-period class.

Almost by instinct, with about thirty seconds left before the bell signaling first period, teachers and students alike begin drifting toward their classrooms. Reba sets out the last of the jars of cow hearts, Donna starts checking off attendance, and Leon begins handing back graded homework from the day before. Sharon sits down in Donna's room and turns to talk to Laura, her best friend, who sits behind her. Jake lingers outside Maria's first-period Typing class until the bell begins to sound and then skips inside his English class as the teacher is pulling the door shut. Nina gives Leon her assignment in Algebra One and grimaces as she is handed back a homework paper with fewer than half of the answers marked correct.

As the first-period bell finishes ringing, students scurry into classrooms, teachers take roll and post it on the door, last-minute makeup is applied, gossip is hushed, but continues, papers are shuffled, dropped, turned in, tossed out. Everything to this moment has been preliminary. School is about to begin.

"Ms. Theiss, I forgot my lab sheet."

"You'll find additional sheets at your station."

"But I forgot which station to go to."

"Those are on the board. OK, everyone should be getting their samples out and pinned down. Remember, key dissection today, then put the heart back in the jar. Tomorrow we finish and will take the rest of your hearts apart."

"Isn't that a country song, takin' my poor heart apart," croons one of the first-period juniors.

"Funny, funny. Let's go, you've only—"

"We know, forty minutes and counting," a chorus back to Reba as the students and teacher scurry about their jobs.

Meanwhile, on the other side of the building, Donna addresses her class on a favorite topic, the causes of the American Civil War. Notes are neatly printed on the board, and her comments richly supplement and add life to the dry treatment the topic receives in the text. Donna loves this era and tries to transmit that passion to her students. Today, for the most part, it works. The discussion of the role of black soldiers in the Northern army and their second-class status has been assisted by the showing of the film *Glory* the past week.

Leon has started the first period Algebra class in his usual way, checking in with the class about their homework, asking which problems were especially difficult. He gets the usual response as well, silence. The Algebra One class first period is made up of freshmen, a group of fourteen- and fifteen-year-olds who

are still a bit more than shy about admitting they don't know something. Leon knows that. He also knows, from just a casual glance at the papers turned in, that almost half the class missed the most difficult homework problems. The question he faces now, as he does every day, is whether to spend time getting those right with every student or to move on. It's his call and, like virtually every call a teacher makes, it is made in isolation and with one eye on the clock.

Jake has his eye on the clock too—at least his open one. His first-period Mythology class is not his favorite. He needed an English course for graduation, however, and this was the only one first period that did not require much writing. He is dozing peacefully in the back of the room as he does so often at the start of the day. The front of the room is filled with kids who are turned on to the topic, and the teacher focuses attention there.

With a class of thirty, many who, like Jake, are there just for the credit, the teacher is happy to have so many students involved in today's discussion of Sisyphus. Jake, meanwhile, dozes on, figuring he knows just enough from skimming the reading to pass the exam.

Sharon is fascinated with the question Mrs. Bennett is raising about the role of the black Civil War soldier. She wonders to herself: could the Civil War have been motivated by other things, things other than freeing slaves, if black soldiers were so mistreated by their supposed liberators? If only Donna could read Sharon's mind. This is precisely the question she hopes will come out of the discussion. But Sharon never raises it, knowing that if Mrs. Bennett finishes her lecture early the class will be given the remaining five or ten minutes of class time to use as they please. Third period will feature a Spanish Two test for which Sharon is not prepared, so every minute helps.

Nina fidgets under Mr. Talbert's gaze as he waits for questions about the homework she just turned in. She wants to raise her hand, she wants to say, "Wait, I don't have any idea how to do half of those problems." She wonders why Mr. Talbert even asks if they understand. She obviously doesn't understand, given that she did not pass the homework from last week. She starts to get warm around the neck. Doesn't anyone else have trouble? Am I the only one who doesn't understand? I'm getting further behind, maybe I should just drop math? Mom said she could barely balance the checkbook, so why am I doing algebra? "Well, if there are no questions, let's go on to the next section," Mr. Talbert's voice penetrates her chain of thought, "and we will plan for a quiz over this chapter for, say, Friday." And I'll plan on explaining another F to Dad, Nina thinks.

Back in the biology lab, time is running out and Reba races from group to group to help them get their samples ready to go back in their jars. "I know you're not finished with that ventricle, but get to class early tomorrow and

catch up.” “Make sure to stabilize the sample, don’t let it fall apart as you put it in the jar.” “Give me your lab sheets, I’ll set them out for you tomorrow.”

Donna has finished what she has always felt is her best lecture of the year and is waiting expectantly at the board for questions. There aren’t any, and on one hand she feels good about that, because she knows the kids understood. But she is disappointed too. This is controversial stuff, and the film not only popularized it but helped kids see what she was talking about. Why don’t any of the kids ask about the connection between the treatment of black soldiers and the North’s supposed commitment to freeing slaves? “Well.” She hesitates. “If there are no questions, use the last few minutes for review. Remember, test on Thursday.” With that, Sharon pops open the Spanish book she has been surreptitiously glancing at beneath her notes all period.

Leon has finished the chalkboard explanation of the distributive property in polynomials and has answered a couple of questions. When no more come forward, he assigns the even-numbered problems to be turned in tomorrow and tells the class to use the last five minutes to get started. Nina closes her book and begins to gather up her materials. Second period is study hall and she will start then.

Jake is still snoozing in the back of English class when the bell rings signaling the end of first period. He wakes with a start and heads for the lockers and Maria. Reba uses the luxury of her second period planning time to let the class go without finishing cleanup. She’ll do it herself and still have time for coffee and a trip to the teachers’ rest room. Leon realizes that once again he’s been able to help only four out of the twenty-two students in Algebra One get started on their homework, and they were not even halfway to the toughest problems. Donna heads down the hall to the teachers’ lounge with, as is always the case, two or three students following her asking questions about the assignment for tomorrow or the test or trying to schedule a makeup session for work missed last week.

The picture from first to second, third, and on through to eighth period doesn’t change much for our students or teachers. All of them, in their own ways, figure out how to accommodate the system within their daily routines. Jake takes the easiest route. A senior who has no real plans past high school, he has signed up for courses that demand little of his attention. Two study halls, two sections of Physical Education, Parenting (which will prove to be most useful as his girlfriend Maria will be pregnant before the end of the year), Consumer Math, Industrial Technology, and the Mythology course. He has already earned before his senior year the twenty total credits he needs to graduate. The only courses he needs to pass this year are English and math, and in both cases he has chosen courses that figure to take little effort on his part. By the end of the year he will have passed those courses, with Ds. He will

also have failed most of his other courses, concentrating on Maria and his car more than on school.

Nina would struggle her entire year with her courses. She had signed up for the traditional college prep sequence which included Spanish, Algebra One, Civics, English, Biology, the required Physical Education course, and Typing, her one elective. Algebra was her Achilles' heel, and once she fell behind in it, there was never enough time for her other courses. As the year progressed, her continuing struggle in math began to consume her to the point where her mother came in to talk with me. Nina had always enjoyed school, but now, according to her mother, she was frequently sick and wanted to stay at home. In fact, periodically Nina would show up in the office during first period complaining of stomach cramps and calling home for someone to pick her up.

Nina was unaware that her mother had been in. I arranged to see her one day during second period. "I want to drop algebra" were the first words out of her mouth when we sat down. "I can't do it, I'm too far behind, and when I work on it I don't have enough time for my other classes." I probed awhile, asking why she didn't like algebra, what it was about it she couldn't do. It has always seemed to me we should help kids master difficult challenges and not avoid them, so I wanted to make sure Nina was doing all she could to get through the course. In exasperation she finally blurted out, "Look, Dr. Wood, it's really very simple. I can't do algebra because of problem sixteen." Puzzled, I asked what she meant. "Well, in class we always learn a new thing. Then we all work the sample problem and I'm always sure I understand. Then Mr. Talbert assigns homework, the even-numbered problems. I start in class and get through a couple, but when I get home I get as far as problem number sixteen when they change the problem. I can't do any more, my parents can't help me, and I miss the rest of the assignment. See, problem sixteen." After one more week of trying, I approved Nina's dropping of Algebra One and moving to Pre-Algebra. Her attendance and grades picked up for the rest of the year, but I'm still not sure it was the right decision.

Sharon visits my home frequently. I had lived in Amesville, one of the several small towns that feed our school, for more than a decade before becoming principal, so I knew a number of the kids like Sharon quite well. One evening she stopped by the house for a recipe around 8:30. She had stayed late after school for marching band practice and to work on a skit her Drama class was putting together. After dinner and a couple of phone calls to friends she had begun her preparations for the next day, which included a cake for lunch with a favorite teacher and friends. The recipe in hand, she was headed out the door when I said, "Have a nice evening." "I won't," Sharon shot back. This was not like her, so I held her up for a moment to ask why not. "Oh,

well, let me see. Tomorrow I have a test in U.S. History, a vocabulary quiz in Spanish, a monologue to have memorized for Drama, my usual Geometry homework of twenty problems, and I need to review my Bio Two notes because Ms. Theiss is giving one of her killer exams on Friday. See ya.” With that she was gone.

A week or two later in a casual conversation with her mom I asked how Sharon managed to handle her load and the rest of her life. “Well, she doesn’t sleep much, except Sunday when she sleeps all day. And I know she could do more in her courses, but her grades are pretty good.” Sharon, in conversation with me at graduation where she was serving as a sophomore class marshal, had much the same to say when we were talking about the upcoming summer vacation. “I look forward to catching up on my sleep and really getting into some of the stuff we studied this year. I never had enough time to really get into the good stuff during the school year.”

It is sixth period and Reba’s lecture on chemical bonding is interrupted by a question from one of the seniors. He has noticed the lab materials left at the stations in the other part of the room and wonders when the Chemistry class will do another lab. She knows that part of the motivation behind the query is to slow down the class, perhaps preventing her from covering the chapter that is to be quizzed early next week. But she also knows it has been quite a while since the last chemistry lab and that she really should do another one. In fact, the labs are her favorite part of the class, giving her time to work directly with each student and to observe how well the kids can use what they are learning.

But how can she do any more? With classes lasting only forty-three minutes, the average lab takes five days—one day to discuss procedure with the class, one day for setup, one or two days to conduct it, and a day for writing out notes and observations. The room can accommodate only one set of labs at a time, so when it is tied up with a biology lab, students in chemistry, physics, and even the other biology classes have to wait their turn.

Reba has done the math in her head all too many times: 180 school days, divided by five days per lab, divided by seven classes, equals about five labs per class if there are not too many days lost to bad weather. Five labs a year. Five labs that have to be carefully chosen to make sure they illustrate the key concepts in the field. Reba knows it just is not possible that five labs will have the impact on the students’ way of thinking that she wants. Her only other choice is to increase the labs in one class at the expense of the others, another bad choice in her mind. So she supplements classroom labs with demonstrations and homework assignments that include extra credit for bringing in materials from home (insect collections, snakes, and fossils fill the room). Every day as she heads home she knows there are better ways to connect kids with science.

Leon gathers up his day's homework and packs it into his briefcase to be graded that night. Even before he starts on it, he knows that fewer than three-fourths of the students will earn a passing grade and a scant one in ten will receive an A or B. The problem is really very simple. Like Nina, many of the students do not get much help with math at home. Thus, while they feel they understand the concepts when working the sample problems in class, when they get home and the work gets harder, they either do it wrong or don't do it at all. Of course, Leon never finds that out until Tuesday night when he is grading the homework done on Monday. By then he has usually moved on to new material, and the students are doing the Tuesday assignment even though they may not totally understand what went on before. He knows this confuses a lot of them, but he also feels pressured to cover the material so the classes are ready for the next course in the math sequence. Nothing in his teacher education program ever prepared him for this dilemma.

At the end of the year Donna surveys her final grade sheets. With a few exceptions, she is generally very pleased. Students do well in her courses, they enjoy her as a teacher, and she works hard to bring high-interest materials in to illustrate periods of American history. Yet she knows that she isn't able to reach her students as she wants. Donna loves her content; she is a student of the Civil War, and she makes annual pilgrimages to the sites she teaches about in the Ancient Cultures class. Every year her Law classes organize a mock trial team, and every year they bring home awards for their performance. She wants to pass on her love for the field, her interest and desire to learn more, and that does happen for some students, but not enough. Obviously, it isn't that she doesn't try, but the obstacles to deeply connecting with every student seem impossible to overcome.

The first challenge is the sheer number of students she faces each day. Her four sections of the required American History class are always full, as are her three elective courses. She is a popular teacher who can never say no when another student asks to get in her course. This means she now teaches 182 students per day, one of the heaviest loads in the school. She knows that to get kids to really use their minds well, to really think about what she is teaching, she should assign more essays and have them do more research papers. But she cannot figure out how she would ever grade them. If she spent just 30 minutes per student reading their work every other week, that would be more than forty-five hours a week of grading alone, not to count the hours spent planning and preparing for her teaching. So she settles for multiple-choice and short-answer exams, hoping each student at least hits the main points and knowing many will go into more depth with things like the mock trial team.

There's the other obstacle: the time to do things like mock trial. Donna knows the large projects like the mock trial and field trips such as the one she

conducted to a visiting Egyptian exhibition in Cleveland are vital to motivating students to learn. These real-world connections to the academic material help her students see how the past connects to the present, how what they learn in school matters in their daily lives. But finding the time to carry out these activities within the confines of forty-three-minute periods is next to impossible. An extended practice period with the mock trial team requires that Donna get a colleague or me to cover other classes. A field trip means time lost with all her other classes, as a substitute is usually more of a babysitter than anything else. Showing a film takes two or three days, good discussions just get started when the bell rings, student presentations have to be shoehorned to fit into the limits of the clock.

All things considered, it wasn't a bad year, she decides. But there has to be a better way; there has to be some way to teach for understanding, not just coverage. Yet coverage seems to be the best she can hope for when teaching 182 students a day, seven periods a day, for forty-three minutes each.

Donna, Reba, and Leon are good teachers. They care deeply about the education young people receive, and work harder for the money they are paid than their counterparts in any other profession.¹¹ Sharon, Jake, and Nina, in their own ways, want to get something out of high school—a job, a ticket to college, or just knowledge about things they care about. Unfortunately, the way we organize high school prevents all six of these people, teachers and students alike, from doing the good work of which they are capable.

When I joined the staff of FHHS as principal during the 1992–1993 school year, I was convinced of one thing: that teachers like Donna, Reba, and Leon could do a good job with students like Sharon, Jake, and Nina *if* the structure of the school allowed it. I was also convinced, as was most of the staff, that the current way of organizing the institution we call high school did more to prevent learning than to assist it. The task we faced together was to imagine and then put into place a way of organizing our school that would enable all of us to do our best work.

We began with our students. We wanted to know how they experienced high school, what they should be like when they graduated, how we could make the school a place where teachers and students knew one another well

¹¹ The starting salary in our district is \$25,000. The most a teacher can make is \$50,000. This means that teachers at FHHS are paid from \$19.62 to \$39.24 per hour—with no pay at all for the twenty to forty hours a week they put in on lesson planning, research, grading, meeting with students after school, and similar tasks. Additionally, teachers are expected to provide their own tools, pay for their own professional development, and attend a wide range of after-school functions including sporting events, concerts, school board meetings, parent/teacher conferences, and graduation. Clearly this is the poorest-paid profession in America.

enough to work together. Institutions are built around formal roles: teacher, student, and principal each playing a set part. We wanted a community built around personal relationships: students working with and for teachers who they knew were committed to their best interests.

This is where every good high school starts. Listen to the conversation in the teachers' lounge, and it will be about trying to understand kids; drop by after school, and you'll see teachers spending extra time helping students with their work; read through lesson plans, and you'll find references to students' experiences in what is being taught. The goal is to build the high school community around the kids. As opposed to much of the talk about school reform that starts with the needs of business or the economy, genuine school restructuring starts with the needs of the kids. They are the ones we are creating a community for, and it's with them that any effort to rethink schools must start.