

Tomorrow's Child

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**Adolescence without
Tears — The
Montessori High
School**

**A Parent's Guide to
Middle Schools**

Boards that Work

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The Montessori High School
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Tomorrow's Child
Reprint Series

Adolescence Without Tears
The Montessori
High School

Adolescence Without Tears

Montessori High School

by Tim Seldin, President
The Montessori Foundation

"Our youth love luxury. They have bad manners, contempt for authority; they show disrespect for their elders and love chatter in place of exercise; they no longer rise when elders enter the room; they contradict their parents, chatter before company; gobble up their food and tyrannize their teachers."

— Socrates, Middle School Educator
The Republic of Athens, 5th Century BC



Adolescence is the middle ground between childhood and the world of adults. Teenagers are neither child nor adult. One minute they are one, next the other. Their bodies are growing overnight, and as sudden spurts of growth begin, they often become awkward as the body's center of balance is thrown off. As their muscular development proceeds, many literally don't know their own strength.

Leaving childhood behind them, teenagers enter a stage of life in which they are betrayed by their own bodies. With the onset of puberty, both their bodies and emotions tend to change dramatically. Some mature precociously and have to learn to deal with the body of a 16 year old and the way that it affects their social relationships with peers and older teens, while others wait impatiently for puberty, convinced that they'll never mature. They have to cope with emerging sexuality and hormonally driven conflicting emotions. It is normally a time of life marked by uncertainty and self-consciousness.

Between their changing bodies, changing social roles, the emergence of mature sexuality, and raging hormones, it is not surprising that early adolescents worry so much about the image they project to the outer world!

Maria Montessori's Vision of Secondary Education

Working in Europe fifty years ago, Dr. Maria Montessori recognized that the basic developmental tasks of adoles-



The photos in this article were taken at the New Gate School, Sarasota, FL, unless otherwise identified as archive photos from the Barrie School in Silver Spring, MD taken during author Tim Seldin's 22 years as Headmaster.

cence are social, physical, and emotional. She observed that teenagers often find it difficult to concentrate on their studies; their lives are not centered on school work but on learning how to be comfortable around one another.



My vision of the future is no longer of people taking exams, earning a secondary diploma, and proceeding on to university, but of individuals passing from one stage of independence to a higher, by means of their own activity, through their own effort of will, which constitutes the inner evolution of the individual."

— Maria Montessori, The Erdkinder



Above all else, they struggle to forget that they were ever children, and in their desperate struggle for self-respect and independence, they often resent and resist their parents' need to set ap-



propriate limits. Not wanting to ever again feel like children, young teenagers deeply resent being embarrassed, especially in front of their friends. Sadly, they often feel embarrassed, and for many years tend to perceive each experience as complete humiliation.

Desperately needing to feel accepted, young teens are faced with an adult world that rejects them and criticizes their silly mistakes, wild mood swings, taste in clothes and music, and tendency to challenge adult authority, each of which is part of their struggle to create a new identity. Is it any wonder that friends are more important than family during this period.

Adolescents need to feel grown-up and accepted and respond with enthusiasm to any adults who make them feel accepted. Unfortunately, in our society there are few, if any, opportunities for early adolescents to feel that adults ever take them seriously. Early adolescents are filled with play. They tend to be focused on themselves and their friends. They are generally disinterested in schoolwork. Many are depressed, lonely, or filled with rage. Ironically, just as young people temporarily lose any real interest in the world of ideas, society expects them to buckle down to serious study.

The teenage years are the sensitive period when children firmly set their personal values and sense of social responsibility. We all know that teenagers are profoundly influenced by peer group pressure and that if kids “fall in with the wrong crowd,” they may make some very poor choices. Here is one of the key contributions that a Montessori high school can make, because within its small, closely knit social atmosphere, Montessori children can grow into confident, warm, accepting, and supportive adults. Montessori believed that secondary schools should prepare children for life, not just for college and a career. A Montessori high school helps young people to discover, accept, and confirm their self-worth as individuals.

Our society has left behind the rites of passage that once facilitated the child’s transition from childhood to full status as an adult. By design, a Montessori high school is a carefully prepared environment that helps teenagers master the secrets of the world of adulthood: how to act appropriately in given situations, earn a living, understand everyday law and economics, and how to express love and friendship. Students are accepted by the school community as adults in training.

Designing Schools to Meet the Needs of Children

Dr. Montessori believed that schools at every age level should be designed to meet the personality and interests of children at that stage. Her close study of the way children think and learn led to the development of her highly effective programs for infant, toddler, early childhood, and elementary education.

As early as 1917 Dr. Montessori began to call for a fundamental change in the way we educate adolescents. She believed that traditional high schools are poorly designed to meet the developmental needs of adolescents. Our society fails to provide pathways that meet many of their basic developmental needs. Adolescence is a period of life where the young person’s primary challenge is to establish once and for all his independence from the family and to become an emotionally and socially mature adult. This may sound as if she was making an excuse for irresponsible teenagers. In fact, she argued that we are creating generations who have failed to make a smooth transition from childhood into adult society.

Creating the Ideal Facilities for a Secondary Montessori Program

New Montessori secondary programs typically begin with a small group of seventh graders, with the class gradually building over the years as more students elect to continue with the school up through the upper level(s). This presents a tremendous challenge for many schools because parents and students are normally reluctant to be part of a fragile new program.

Many factors contribute to this, all of which are tied to our culture’s image of what a junior or senior high school ought to look like. For example, parents and students alike tend to expect a fairly large enrollment, which offers students a wide range of friends and extra-curricular activities.

In a country where secondary schools commonly have enrollments of more than a thousand students, you can expect some raised eyebrows when a Montessori middle school program open its doors with fewer than ten twelve year olds.

Programs are organized into small communities (typically referred to as “houses”) ranging in size from 30 to 75 students. Depending on enrollment, each “house” will commonly have two, three, or four teachers assigned to this community of learners. While students may also take courses from other adults in the school, this team of adults serves as their advisors, mentors, and primary teachers.

Typically a secondary Montessori program will be organized into two or three Houses covering either a two- or three-year age span. For example, at Barrie we divided the Upper School into three groups: the seventh and eighth grade; ninth and tenth; and eleventh and twelfth grade houses. While students normally have friends at every grade level, each house is a small school within a school.

Ideally, each house will have its own suite of classrooms and meeting areas. Most often programs are forced, by budget or limited space, to adapt themselves to existing facilities. For New Gate, our laboratory school in Sarasota, FL, we have developed one model which I feel will be ideal for an established “house” of perhaps 45 students. To the best of my knowledge, it doesn’t



actually exist anywhere as of yet, but represents a blend of many programs' facilities that I have visited.

Each House will be focused around a commons room of approximately 2,000 square feet. This space will be set up for reading and quiet study. At least at the beginning each common room will contain part of the upper school library. At one end of the commons there will be a small stage which will be used for debates, student presentations, guest speakers, and performances. As in many schools, the students and teachers will eat their lunch in the commons room.

Off the commons there will be several smaller rooms. Three will be used for seminars, with a large conference table and seating for up to 10. Another will be used as a math lab, set up for students to work alone or in small groups, and equipped with a wide range of apparatus for making math concrete: Montessori and Mortenson math apparatus, and a collection of scientific measurement and surveying equipment.

NOTE: Montessori materials often no longer appeal to middle-school students. In their search for a new identity, they want to avoid anything that reminds them of their childhood years. However many students still lack the ability to grasp math abstractly, while others may need to review occasionally. As a result, Montessori middle-school students rarely want to work with the Montessori materials.

Dr. Paul Epstein, during his years as Head of The Barrie School's junior high program found that students responded positively to activities in which they were challenged to create their own "Montessori" materials in the class art studio or craft shop.

They used these created materials to present lessons to younger elementary children. With this strategy, students who were resistant to working with apparatus that they considered "baby-ish" attained the same result through the steps of creation and teaching concepts that they did not yet fully understand to other children.

A fifth room serves as a science lab, with a large greenhouse attached. The lab is equipped for the life and physical sciences, with corrosive-resistant work surfaces, sinks, Bunsen burners, aquaria, animal cages, and secure storage for chemicals and equipment. For safety, the lab has an emergency shower, eye wash, and ventilated fume hood in which students can safely work with potentially noxious chemicals.

A sixth room houses an art studio and craft workshop. Creative expression is particularly appealing to many adolescents. In addition to formal lessons, students should be able to engage in the arts as interest, workload, and schedule allow. The craft workshop should provide tools for building model structures from wood, paper, and other materials. Students often construct dioramas, models of ancient buildings, little machines, or re-creations of historical artifacts.

Finally, a small but complete kitchen is important, allowing students to pre-

The Basic Elements of a Secondary Montessori Program

- It teaches students to think for themselves and develop logical reasoning, research skills, and higher-order "formal" thinking skills rather than having students memorize predigested concepts, theories, and information presented in lectures and textbooks.
- The curriculum offers a broad view of the world, emphasizing ecological interdependency, the historical development and inter-connectedness of ideas and events, and an international/transcultural perspective.
- The curriculum is developmentally based and appropriate to meet the intellectual, social, emotional, and physical needs of adolescents.
- The course of study goes beyond the traditional college preparatory curriculum, teaching students how to think clearly, do their own research, express themselves in writing

and speech, and apply their knowledge.

- The course of study is an "integrated thematic approach" that ties separate disciplines of the curriculum into studies of the physical universe, the world of nature, and the human experience.

This integrated approach is one of Montessori's great strengths. As an example, when students study the culture and history of the ancient Greeks in Humanities, they also study mythology and read Homer and the great Greek Tragedies. As they read Shakespeare, secondary students study the Elizabethan period and attend performances of Shakespeare.

- Montessori secondary programs do not emphasize academic competition among students. The program evaluates students on a logical, objective basis. Students are not graded on a



curve but rather are evaluated individually against clearly stated academic objectives through a wide variety of authentic assessment techniques, including portfolios, long-term projects, and self-evaluation,

- Montessori at the secondary level encourages students to value the process of learning, especially the ability to learn from their mistakes.
- The faculty is flexible in teaching styles, which allows the modifi-



Sports and competition are important aspects of life at the secondary level. This archive photo was taken at the Barrie School in Silver Spring, MD.

pare their own meals. In one model, which I first saw in Nancy Hallenberg's Middle School classroom at the St.

Joseph's school in Columbus, OH, students took turns working with a staff member or parent volunteer to plan each week's lunch menu, purchase the ingredients, prepare the day's meal, and serve it to the class in a restaurant-like setting.

The meal was eaten on real plates with silverware, glasses, table cloths, candlelight, and quiet music. In practice, Nancy had two small teams working each week: one to prepare the meal and the other to serve and clean up. While it was true that those students involved in this process missed a few hours of class time, the lessons in practical life and the peaceful atmosphere of lunch time in Nancy's class were well worth it.

Enhancing the Program by Use of Outside Facilities

In designing a Montessori secondary program, it is nice, but not essential, for the school to provide a gym, athletic fields, or fully equipped library on cam-

pus. Many smaller schools have creatively addressed these challenges by arranging to use a nearby gymnasium at another school, by contracting with a local swim and racquet club, using public athletic fields, and by transporting students to local public or college libraries.

Some programs may even want to explore the use of science labs, art studios, or other facilities to give their students access to programs not possible on their own campus. The obvious trade-offs include the cost of transportation, travel time, and the requirement to fix the week's schedule around the times when these outside facilities are available.

"All my life I've struggled to keep the schools that I attended from getting in the way of my real education."

— Mark Twain

cation of assignments and testing strategies to meet individual student's learning styles and special interests.

- The curriculum allows students to learn through experience and practical "hands-on" application.
- The faculty consciously strives to help students develop self-esteem, independence, responsibility, compassion, openness to new experience and learning, patience and self-discipline, acceptance of others, and effective and satisfying social relationships.
- There should be a sense of community among the faculty and students, allowing many opportunities for student participation in the planning and operation of the life of the school community.
- Students are introduced to social issues of the community in which they live, both through the curriculum and through field experiences, volunteer efforts, and internship projects.
- The program facilitates each student's transition into adulthood

by supporting the development of effective and responsible interpersonal and social skills, particularly in the areas of the relationship between the student and family, relationships with peers, relationships with the opposite sex, and the development of a capacity for financial independence.

- The school should be a community of young people and adults based on kindness, trust and mutual respect.
- The school should be a social laboratory in which young adults learn the skills of living in the adult world within a safe environment
- Ideally, the teachers should be renaissance men and women who serve as mentors and facilitate the process as their students learn how to observe, listen, read critically, gather information, and learn from hands-on experience.
- The school should consciously promote entrepreneurial spirit.
- The school should consciously promote students' personal spiritual

and ethical development and encourage service to the community.

- The curriculum should offer an intellectual program which is designed to allow students to blossom without boredom, allowing children with exceptional talents to grow without having to leave the prepared social environment of the school to enter college at a premature age. (It would do so by tapping into the broader local and national community to arrange tutorials, mentorships, and individual studies with enough challenge and structure to fit each child's personality.)
- And finally, the school should ideally be located in a physical setting that inspires contemplation and spiritual harmony such as one finds in the mountains, redwood forests, desert, some gardens, and beside the sea. (Most often land, rather than elaborate buildings, creates the desired effect. The buildings can be simple if the campus makes its people smile each time they walk outside.)

Secondary Montessori Teachers: *Selecting Staff*

The typical Montessori program will be organized into a small school within a school, which we call a "house," made-up of 30-45 students covering a two- or three-year age span. Two, three, or four teachers will be assigned to work with this group on a full-time basis. They will be much more than just teachers of specific subjects; they will be mentors, counselors, and guides through the learning process.

Certified and experienced secondary Montessori teachers are so rare at this point that any school contemplating a new program should plan on sponsoring one or more teachers through secondary Montessori teacher training. The obvious alternative is to open the program with a staff that is not trained at the secondary level. Although this is not something that I would recommend, new secondary programs may see it as their most realistic option.

Secondary Montessori teachers should not be thought of as specialists in one area of the curriculum, as you find in traditional high schools. Instead of teaching science, math, or history, they integrate the course of study into thematic units. In some programs, one teacher will teach all of the major subjects, much as elementary teachers do. At a minimum, he or she will be expected to tie together two or more traditional subject areas, such as science and math, or English and social studies. The ideal secondary Montessori teacher is a renaissance man or woman, well educated in many disciplines and fascinated by new opportunities to learn. A program may supplement the skills of the full-time core-teachers by bringing in other part-time specialists.

The teacher's personality and ability to relate to adolescents is perhaps the most important element in predicting his or her potential for success. The most brilliant teacher will fail miserably if unable to win the trust and friendship of his students. At no stage of education is it more important that the teacher become the student's mentor, confidant, and trusted friend.

In traditional secondary schools, teachers tend to see helping students absorb the curriculum as their fundamental goal. In Montessori, we seek a balance between academics and emotional, social, and spiritual growth, which leads students to a place where they are honestly ready to learn something.

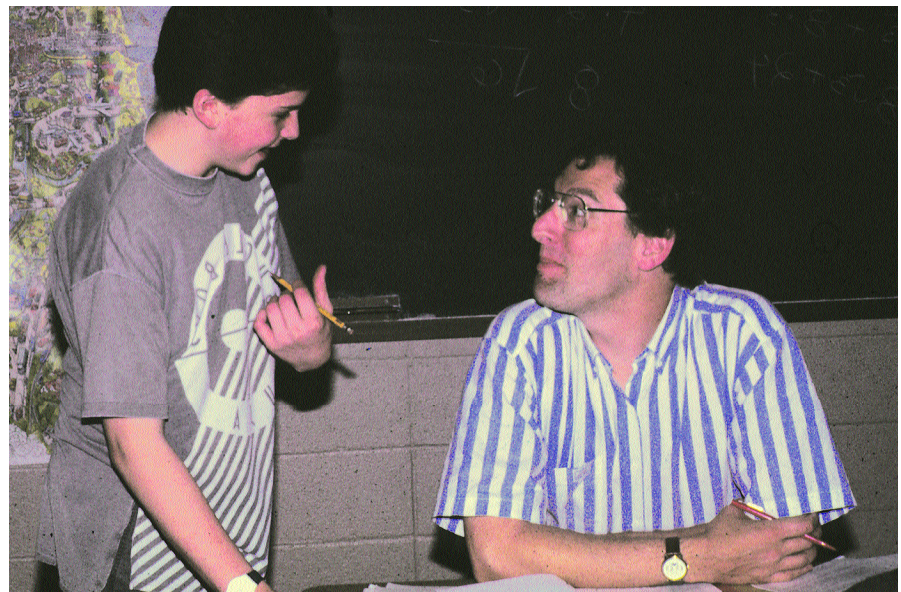
The secondary Montessori educator must recognize the crucial role played by this process of social and emotional growth. Group process and lessons in everyday living skills are not supplemental activities to enrich the real curriculum; they are to a very real degree the most important element of the curriculum.

The ideal secondary Montessori teacher has a thorough understanding of:

- early childhood and elementary Montessori philosophy and curriculum;
- adolescent psychology and development;
- the mainstream of American middle school and secondary education and contemporary college admission requirements;
- Montessori's thought in the area of adolescent education;
- today's most promising and innovative secondary curriculum elements and teaching methods;
- individual and group counseling techniques;
- strategies for facilitating the growth of independence, responsibility, logic, and compassion in teenagers; and
- the practical issues of organizing, structuring, and administering alternative secondary school programs.



The archive photos on this page were taken at the Barrie School in Silver Spring, MD.





Students study marine biology in the Caribbean in this archive photo was taken in a French class at the Barrie School in Silver Spring, MD.

What Kind of Student is Right for a Secondary Montessori Program?

Secondary Montessori Programs are primarily intended to serve as the logical next step for a child who has come up through the early childhood and elementary Montessori programs. Ideally, one Montessori secondary program might serve an entire community, drawing students from several different Montessori elementary programs. It is possible to accept a limited number of older students who are coming from other more traditional schools, but only if they are carefully screened and selected.

The climate within a secondary Montessori program is essential. To succeed, the new program must be able to maintain an atmosphere of warmth and respect. There must always be a strong sense of community in which students and teachers live and work together very closely. Each student must feel that he or she belongs to and is accepted and appreciated by the entire community of students and teachers. I don't mean to suggest that secondary Montessori students won't tease one another, fuss, and sometimes feud. They will! But there must be an over-riding sense that the school is both physically and emotionally safe.

Naturally the program needs students who are looking for an academic

program that will be challenging and the opportunity to participate in "extra-curricular" experiences that will enhance their personal growth.

As Kathy Channick, who counseled new students at Barrie's Montessori high school, once put it,

"The students who can make the transition aren't just looking for a school where they can get A's; they are looking for an environment where they can become part of a community with strong shared values. We can't accept students who are in serious conflict with their parents or who are 'turned off' to school. They wouldn't find a peer group, because the culture among the students is to do well and be personally challenged."

A Montessori secondary program like Barrie is an excellent school for an older student who is ready to think, read, and seek out real challenges: kids who are "turned on to school," because the program reinforces that attitude.

Naturally students coming up from the elementary Montessori classes tend to do beautifully in the Upper School program, however, we continue to find that students who have grown up in families which share similar values to the school's philosophy most often do very well."

The Structure of the Day: *Maintaining a Balance of Structure and Flexibility*

Secondary Montessori programs normally do not look very much like elementary Montessori classrooms because of the very different personality of the adolescent. Where the elementary child often works alone, adolescents need to constantly interact with their friends. When they were ten, Montessori students may have enjoyed working with the Montessori materials, but at twelve they don't want to be reminded of the years when they were "just kids," and they may reject the Montessori materials as "baby-ish."



On the other hand, learning in a Montessori program rarely involves passively sitting back and listening to a teacher talk. Students learn through participating in seminars, meeting with guest speakers, individual research, dramatic 're-creation' experiences, hands-on projects, building models and dioramas, field trips, and internships. This kind of learning asks students to get involved, and questions, and think! Above all, it is rarely boring.

Secondary programs strive to maintain a balance of structure and flexibility. Teacher initiated group lessons are usually brief; rarely lasting more than 30 minutes. They are intended to get students interested and give them just enough information to get them started on independent study, projects, or discussion.

Seminars and specialist classes are scheduled in such a way as to allow students large blocks of time to work without interruption. Scheduling for these group activities is flexible and allows the teachers to set aside the amount of time most appropriate for given activities.

Study Guides

Many secondary Montessori programs give students Study Guides to help them organize their work. Ideally these guides are not prepared by the teachers alone, but by the teachers and students working together to set goals and suggest a learning path defined in accordance with the student's individual learning style.

Study Guides typically break the week's work into three elements:

- ▲ Skills and knowledge that the student will hopefully absorb
- ▲ Experiences in which the student is invited to engage, such as attending seminars or talks, books to be read, movies viewed, field trips taken, presentations given, lab experiments completed, tests taken, etc.
- ▲ Essays, reports, and other assignments or projects which are to be turned in.

Many programs expect students to demonstrate a given level of mastery before they are allowed to move on to the next level. Unacceptable work or performance on tests of skills and knowledge must be resubmitted after additional lessons or coaching.

It is common for secondary Montessori programs to allow students to select from among several optional learning strategies and assignments or to propose another option.

Using this approach, secondary Montessori students continue to learn how to pace themselves and take responsibility for their work—skills that are critical to success in college.

Town Meetings

Montessori described ideal secondary program as a “social laboratory” where young people could master the skills of everyday social interaction and community life in a controlled learning environment.

Ideally the students and teachers would live together in an authentic community (The *Erdkinder* farm school). Today's secondary Montessori programs commonly address this need through periodic retreats, lessons in everyday psychology and personal development, and daily group meetings.

In most programs, students and teachers gather every day in Town Meetings, where they learn how to work together, express their thoughts clearly and honestly, resolve disagreements, compromise, and reach consensus. There is a real sense of community.

below: Students participate in an archaeological dig in this archive photo from the Barrie School in Silver Spring, MD.



The World is Their Classroom ...

Montessori secondary programs will normally go out into the community to give their students a wide-range of projects and experiences that would never be possible in a traditional schedule. Some schools go out as opportunities arise; others schedule one day a week for *academic extensions*, breaking off into small groups to visit museums, galleries, the theater, university libraries, the courts, governments offices, and scientific laboratories.

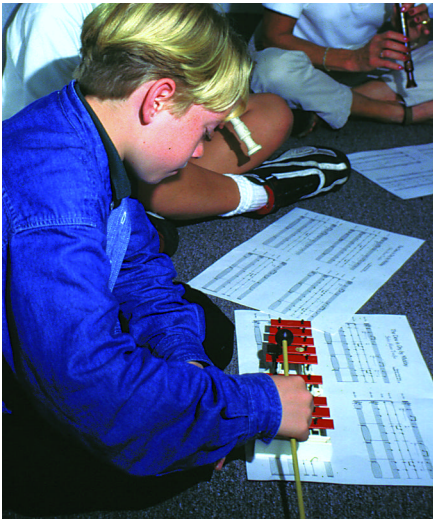
Students also use Extension Days to work on special projects or to study issues in-depth. They contact and visit government agencies, public interest groups, and relevant industries, pour through the public record, or interview key public figures. Gradually, they try to pull information together and attempt to interpret the “big picture.” Students form their own opinions and defend them in class, often with very spirited debates!

Secondary Montessori programs commonly arrange for their students to participate in community service and internship experiences. At certain points of the year, students will engage in internships in the business, professional, or public interest communities. Students develop their own resumes and are expected to find their own internship position.

They can be found interning in government offices; working for Greenpeace; studying at the zoo; assisting in doctors' offices, architectural firms, veterinary clinics, radio stations, newspapers, hospitals, retail businesses; or volunteering in shelters for the homeless. Many internships develop into long-term relationships as students prove their worth.

Students begin to think about their career interests, and as they discover their ability to make a difference in the world, they become more self-confident and independent.

One of the unique programs in a Montessori high school is the opportunity for a wide range of international study and travel. Montessori education is worldwide, and each program has sister schools across America and in Europe, Asia, and South America. There are invaluable opportunities for correspondence and student exchange experiences. Using Barrie again as an example, students have engaged in travel/study programs in Israel, Canada, France, Spain, Italy, Greece, Mexico, Costa Rica, Russia, the Caribbean, Japan, and China. With our strong orientation toward ecological studies, Montessori high schools also sponsor camping, canoeing, and sailing expeditions every year.



The Secondary Montessori Curriculum

Secondary Montessori programs don't attempt to offer a cafeteria-style menu of elective course options. After a few weeks most teenagers are either enthusiastic or bored with their classes according to how comfortable they feel with their classmates and the instructor, no matter how interesting the course title sounded at registration. The goal is to help students learn with some depth rather than skip through material so quickly that it is soon forgotten.

There is no standard secondary Montessori curriculum as one finds at the early childhood and elementary levels. Secondary Montessori programs commonly follow a carefully considered core-curriculum designed to both prepare students for college and help them form a sense of the big picture of our world and culture: how knowledge was discovered, how it is used in everyday life, and how apparently separate "subjects" fit together.

Respect permeates a Montessori school. It produces the warm, comfortable tone for which our schools are best known. Montessori assumes that students are responsible and capable; that they have within them the ability to succeed.

While standards are high, Montessori doesn't believe that competition and stress are the best ways to motivate learning. Over and over again, teachers challenge students to think — really think!

While we can find bright highly motivated students in every high school, al-

though they are usually a distinct minority, most teenagers get relatively little long-term learning out of their education. They put in time, do their assignments, cram for tests, and quickly forget after grades are posted. Many colleges feel that this is equally true at their level.

Several studies show that students in traditional programs don't really understand most of what they are being taught. Harvard Psychologist and author of *The Unschooled Mind*, Howard Gardner, goes so far as to suggest that "Many schools have fallen into a pattern of giving kids exercises and drills that result in their getting answers on tests that look like understanding."

But several decades of research into how children learn have shown that most students, from as young as those in kindergarten to students in some of the finest colleges in America do not, as Gardener puts it, "understand what they've studied, in the most basic sense of the term. They lack the capacity to take knowledge learned in one setting and apply it appropriately in a different setting. Study after study has found that, by and large, even the best students in the best schools can't do that." (*On Teaching for Understanding: A Conversation with Howard Gardner*, by Ron Brandt, Educational Leadership Magazine, ASCD, 1994.)

Our goal in Montessori education is to help students to learn how to learn; to trust their own ability to discover and think logically. We seek to foster their curiosity and self-motivation.

Montessori recognizes that people learn in different ways and at different paces. While it isn't often practical to individually pace course work at the high school level, we do allow for a great deal of flexibility.

Students can spend more time on areas that they find difficult and move ahead more quickly in those subjects in which they excel. Beyond that, we encourage students to pursue in depth areas of special interest. We encourage them to collaborate and work together.

For these reasons, we build as many opportunities as possible into the secondary curriculum to allow students to move around, work with their hands, and master practical life skills. From the experience of hundreds of interesting and practical hands-on projects and challenges, the undirected behavior of early adolescence gives way to a sense of personal satisfaction, high motivation, and the renewed ability to focus seriously on academic work.

Learning How to Work:

Economic Independence

To become independent from their family, teenagers have to learn how to stand on their own feet financially, emotionally, and socially. This has been true throughout history, but with education extended well into young adulthood in complex urban societies like ours, it has become increasingly difficult for young people to establish their independence until much later in life. We have created a state of extended adolescence for the vast majority of students who go on to college, and so we end up with 21 year olds who still have not finished the business of growing up.

In their drive to separate psychologically and socially from their families, teenagers often become resentful and argumentative if they feel they are being treated like children, which is aggravated by the knowledge that their parents control the purse strings. Regardless of what we do, adolescents will find ways to establish separate identities apart from their families. If they can't do it through positive steps, they will create a sense of separate identity by establishing psychological distance from their parents and adult society: The culture of youth.

Teenagers need the concrete experience of beginning to earn their financial independence and the self-respect that it brings. To accomplish this goal, we don't need to teach them a trade and send them off to practice it for life (how many would know what they wanted to do in the first place?). Instead, we can teach them how to work and give them the sense of self-esteem and self-reliance that comes from contributing to the family income in some degree,



This archive photo of students helping out in the school office was taken at the Barrie School in Silver Spring, MD.

whether they spend it on clothes or save it for college.

To meet this need, the secondary Montessori program will attempt to offer a wide range of practical experiences designed to help them develop some practical skills during the school years and to assist them in the formation of their own enterprises. Whenever possible, Montessori schools will normally engage older students to work around the school, assisting with younger children in the primary or elementary classes and volunteering or working as assistants in their summer camps and before-and-after-school programs. These older students are often found answering phones in the school office, xeroxing, pulling trash, and vacuuming the carpets.

Montessori schools usually urge parents to encourage and support their children's interest in earning their own spending money through part-time jobs or opening their own enterprises. These sorts of experiences build character and, properly planned, need not interfere with school. In fact, they represent one of the most meaningful ways that we can help our children to complete the process of growing up.

Older students usually have developed enough specific skills to allow them to run small business enterprises organized along the Junior Achievement model: corporations financed, owned, and operated by groups of committed students with minimal faculty support.

One project that we have seen work in some schools is a small café, which sells coffee, cocoa and donuts before school and hot sandwiches, soups, fruit, and deserts at lunchtime. Another is a student store and craft shop, which sells textbooks, paper, pens, greeting cards, computer diskettes, along with student crafts and artwork.

Around the country, one often hears of entrepreneurial teenagers running all sorts of services, such as baby-sitting exchanges, catering services, odd-jobs, and lawn care. At various points in my years at Barrie we ran a student coffee house on weekends, which served wonderful coffee and pastries and provided talented young musical groups from our area the opportunity to perform in an intimate setting.

Tim Seldin is President of The Montessori Foundation and the co-author of Celebrations of Life and The World in the Palm of Her Hand.

A Parent's Guide to Middle Schools

*by Paul Epstein, Ph.D.
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For nearly 45 years, educators and parents have redesigned junior high schools into middle-level education programs (Kellough & Kellough, 1996). Successful middle-level education programs today coordinate a complex framework involving an understanding of early adolescent developmental needs and learning tendencies, family dynamics, middle-level school practices, community and national systems, and visions for how best to prepare students for 21st century economic and political adult life.

The Early Adolescent.

Adolescence is often portrayed as a time of stress and storm. Adolescents are believed to be irresponsible, unresponsive, unmotivated, crazy, and unpredictable. But, according to research, this is a myth. These descriptors are overemphasized and misleading (Scales, 1991). Early adolescence coincides with puberty, a period of rapid skeletal and genital growth. Growth spurts for girls occur about two years before boys, with 10 1/2 being the average age of onset for girls, 12 1/2 for boys. Individual maturation rates and durations do vary, however, and rapid or lengthy periods of physical and psychological developments throughout the adolescent years are both normal.

These changes are often perplexing to early adolescents and to their parents and teachers. Early adolescence is a wonderful, confusing, perplexing, embarrassing, awkward, and exciting time. These kinds of emotions can be experienced by both early adolescents and parents; a task for adults is to stay off the roller coaster. Engaging in abstract reasoning is a new possibility; early adolescents can explore and question values

from new perspectives and logical vantage-points. They express idealism and concern for others. Peer groups are important, and there is an increased reliance on privacy. There is also an increased desire to make commitments to friends.

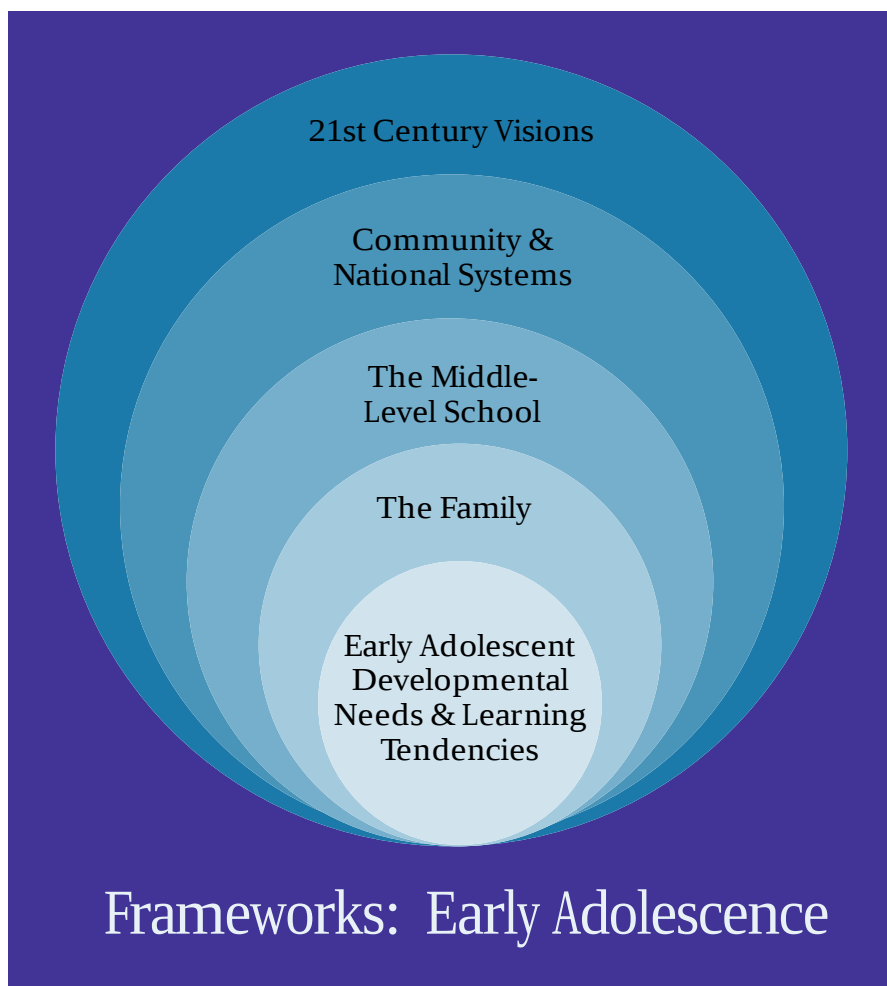
In preparation for adulthood, early adolescents need positive social interaction with their peers in which to establish trust, self-esteem, and self-confidence. It is also possible that gender-specific forms of interaction are required for this age (Brown & Gilligan, 1992). Early adolescents are creative and thrive on occasions for self-expression in a myriad of forms; for example, athletics, music, dance, drama, writing.

These activities often occur beyond the spheres of family and local community influence. Providing safe environments during the transition from childhood to adulthood is a concern. Definitions of safe environment vary between families and between different ethnic and cultural populations. The Internet, for example, provides access to our world of information; it also eliminates adult and non-adult distinctions. As this distinction blurs, early adolescents often receive conflicting messages about expectations and standards. Conflicting messages often affect self-esteem and self-confidence.

Middle Schools.

Middle level programs should be structured to satisfy cognitive, physical, social, emotional and moral developmental needs of early adolescents. The National Middle School Association (1997) warns, "Not meeting these needs often results in alienation from school, loss of general self-esteem and a sense of belonging, and destructive methods of coping, including delinquency and drugs" (p. 1).

While the majority of adolescents successfully transition from childhood to adulthood, it is estimated that 25% of adolescents are at-risk for delinquency, pregnancy, sexually transmitted diseases, substance abuse, eating disorders, and suicide (Santrock, 1997). Given the changing economic and political climates of our society, early adolescents also face risks of not being prepared for envisioned life as adults in the 21st century. One vision urges educators to prepare graduates who can think systemically, process and relate information, identify and work with a variety of resources, utilize a variety of technologi-



cal tools, and successfully communicate and cooperate with teams of workers (SCANS, 1991).

Efforts to develop middle level programs that address early adolescent developmental needs and learning tendencies have been guided by successive editions of the National Middle School Association's position paper, *This We Believe* (NMSA, 1995). Consequently, there is widespread agreement as to the structure of a middle level program. There is also widespread agreement that administrators, teachers and parents need preparation and support to develop and implement these programs.

Today's middle-level programs should offer a variety of grade level combinations (for example, grades 5-8, 6-8, or 7-9) to accommodate a school district's enrollment patterns and other budgetary constraints. Students are grouped in small learning communities called "teams" or "houses" led by teachers who are trained experts at the middle level.

Students also meet in smaller advisory programs; topics include setting

goals, planning, assessing learning, and multicultural awareness. Teachers work in interdisciplinary teams and teach an integrated core academic program offered in flexible or block schedules. Middle level learning experiences are designed to help early adolescents make sense of themselves and the world around them using a variety of materials, resources, and technologies. Students also participate in a variety of electives or exploratory subjects including extracurricular health and fitness programs, intramurals, and clubs (Forte & Schurr, 1993).

Middle-level teachers incorporate cooperative learning and other active learning strategies, various computer and software technologies, and authentic assessment practices into their instructional strategies (Clark and Clark, 1994). A middle-level curriculum should engage students in reflective thinking, problem solving, critical ethics, and creative thinking curriculum (Beane, 1990).

Community-service programs are also an essential component of a middle level program; efforts are made to connect the school to the community and to engage families in the process of edu-

cating their daughters and sons (Arnold, 1990). In sum, a middle-level curriculum provides activities that are personally meaningful and socially contributive.

Montessori's *Erdkinder* Model

The Montessori model of middle-level education is based on an understanding of the developmental needs and learning tendencies of early adolescents. Incorporating all of the elements of today's middle-level programs, the Montessori model originally added one other unique idea. Writing in 1937, Dr. Maria Montessori recommended involving early adolescents with the land. She called her middle level program the *Erdkinder* — the children of the land.

Montessori believed the designs of puberty warranted a holiday from traditional lecture-based instruction. Instead of confining students to classrooms, she proposed instead a program that would help them accomplish two key developmental tasks of early adolescence — becoming psychologically and economically independent. Only then, she argued, could early adolescents escape from the pettiness of puberty and take seriously the realities of life in society.

The Montessori *Erdkinder* model was a farm-based boarding school where students would live throughout the year and manage a hostel or hotel for visiting parents. The students would sell farm goods and other products in their own store. Farm management and store economics would form the basis of meaningful academic studies.

The *Erdkinder* curriculum would encourage self-expression through music, art, public speaking, and theater. Students would also study languages, mathematics, science, history of civilizations, cultures, and technological innovations. The *Erdkinder* would also possess a "museum of machinery," where students could assemble, use, and repair their own farm equipment.

The Montessori middle school is an example of successful middle-level programs. Since 1982 an estimated 60 private and 15 public schools now offer 6th - 8th or 7th - 8th grade Montessori programs. Various aspects of the *Erdkinder* model are found in some of these programs. Students in one program go to the land for a week to build shelters, cultivate crops, and recycle. Students in another program run a baby-sitting business. These kinds of "practical-life" activities are essential.

They provide direct learning experiences that involve the early adolescent with meaningful learning activities.

A Montessori middle school should also offer a challenging and rigorous academic program. Montessori middle-level students should study inter-disciplinary subjects in mixed-age groupings using critical thinking skills and situations of cooperative learning involving real-life experiences.

Their levels of achievement are high; the Montessori middle-level curriculum builds upon the successful learning experiences of the elementary and early childhood programs. It is not uncommon to find Montessori middle-level students completing geometry in the 8th grade, writing 10 to 15 page research papers in an expository style, using high school laboratory techniques, and studying a variety of classical and contemporary literature that might include Shakespeare, Ibsen, Hesse and Miller.

Montessori once noted educators and parents must "follow the child." New un-

derstandings of the early adolescent require us to rethink and reassemble suitable learning environments in which our children can fully exercise their potentials. We are just beginning to understand the potentials and capabilities of the early adolescent.

It's astonishing to consider that the average life-expectancy during the time of the ancient civilizations was 20 to 25 years. What we now call "early" adolescence was once middle age. Imagine: the Pyramids, Parthenon, Coliseum and other ancient structures may have been built by eleven, twelve, and thirteen year olds! Middle level schools should free the possibilities inherent within middle-level learners today.

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Where are all the Montessori high schools?

Your children have been in Montessori all their lives. They love school and learn enthusiastically. Montessori has been the perfect match, but your children are approaching the age where they'll have to leave Montessori if their school doesn't do something soon! And so you ask, "Why aren't there any secondary Montessori programs in our town? What would it take to start a middle-school class at our school?"

Most Americans have the impression that Montessori is just for preschool. Even though Montessori schools have spread all over the world during the last 91 years, in the US, most schools stop after kindergarten. Some run through sixth grade, but secondary Montessori schools are very rare. All this is beginning to change as more and more Montessori schools open elementary classes, and many have either opened or are exploring the possibility of developing middle-school programs.

The first secondary schools organized along Montessori principles were founded in Europe in the 1930s. Ann Frank, the young girl made famous by her poignant diaries, was a student in the first Montessori high school in

Amsterdam when it was closed by the Nazis. At last count, there were eight large, highly regarded Montessori high schools in the Netherlands.

Secondary Montessori programs developed sporadically in North America. A number of schools in the US developed secondary programs that were influenced by Dr. Montessori, but which were not officially recognized as "Montessori." They included the upper-school program opened in the early 1970s at Ravens Hill College in Philadelphia, the early-adolescent program begun in 1978 at Near North Montessori in Chicago, and the Montessori Farm School in Half Moon Bay, CA. I graduated from another in 1963 — the Barrie School outside Washington, DC.

Barrie was founded by my family in 1932 and opened its upper school in the late 1950s. I had the privilege of teaching at Barrie and later served as its headmaster for 22 years. In 1982, Barrie was officially recognized by the American Montessori Society (AMS) as the first pilot Montessori high school in the US. That same year, Paul Epstein, Harvey Hallenberg, and I organized the first AMS-accredited secondary Montessori teacher training program at Barrie's Institute for Advanced Montessori Studies; another program was opened in Dallas shortly afterward by Dr. James Paulik. (After I left Barrie to lead the Montessori Foundation, Barrie's board and new headmaster de-

cided to turn its Montessori upper school into a traditional academic program, and the Institute for Advanced Montessori Studies no longer offers secondary Montessori training.)

Today there are perhaps 200 Montessori middle-school programs in North America, and many more are in various stages of development. They range from small independent school programs, such as Harvey and Nancy Hallenberg's program at the Claremont School in Boca Raton to large public Montessori middle-school programs. Dr. Betsy Coe offers AMS certified secondary Montessori teacher training at the Houston Montessori Center and the North American Montessori Teachers' Association is offering four-week non-diploma granting seminars in secondary Montessori education.

As we approach the 21st century, the secondary Montessori movement continues to spread in both the public and private sectors. New Gate, the Montessori Foundation's laboratory school in Sarasota is currently engaged in the process of establishing a Montessori secondary program. Through the following articles in this and future issues of *Tomorrow's Child*, we will document the challenges and opportunities for schools that wish to create educational opportunities for their older Montessori students.

— Tim Seldin, President
The Montessori Foundation