

How Do I Learn Best; Let Me Count the Ways

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Overview

How Do I Learn Best; Let Me Count the Ways is designed to provide information about personal learning styles that have been identified by educational experts. The curriculum is written to be used by any teacher who deals with students in grades three to five. I will use it with the students that I see each week at the Pittsburgh Gifted Center. It is designed to provide information about personal learning styles that have been identified by educational experts.

Becoming familiar with the many ways of learning that exist will help any teacher meet her students' needs. Understanding the varied ways in which learning can take place will lead to activities that can be used by students to determine their own learning style. As students come to realize how they learn and to begin to think about their learning styles, they will experience more meaningful learning. The last part of the curriculum will explore meta-cognition and addresses this issue by having students think about *how* they think and reflect on how they began to learn, how they are learning now, and how they plan to continue to learn and grow. This will be accomplished through their journal writing. Journal writing will be the vehicle through which students will reflect on their personal learning process.

Rationale

The purpose of developing this curriculum is to research and become familiar with various learning styles in order to have my students become aware of how they learn best. Knowing how they learn best will help them to be more successful in their learning. Thinking about how they learn will help them to know themselves better. Writing about learning will reinforce the skills needed to succeed in school.

I went to elementary school in the late 1950's to mid 1960's. Everyone learned in the same way. I learned to read by memorizing lists of words which were printed on oak tag cards. Each night I practiced my words out loud. I learned to add and subtract by memorizing flash card facts over and over again. I had my mother help me increase my response time so I could be the fastest in my class. Cursive writing was my worst class and I struggled, without success, to perfect the Palmer method. This was a system of penmanship instruction to develop uniform handwriting. High school did not bring any changes to how information was presented in the classroom. I was still memorizing math facts and science facts, through senior year, in order to pass exams. While some teachers began to encourage discussion and group projects, they were not the norm.

After high school, I went to undergraduate school at the University of Pittsburgh to pursue a degree in secondary Social Studies. As I began to take courses in methods of teaching, I saw slight changes, but secondary Social Studies was still all about memorizing geographic and historical facts. I was told that instead of lecturing every class, the teacher should have students group together to learn and then present the material to their peers. Not much was changing in the delivery of the material. Whether individual or in a group, the learning was the same. The student listened, remembered or not, repeated and was rated.

I started my teaching career with sixth graders at Greenway Middle School in 1973. At this time, the middle schools in Pittsburgh began to try a multi-media and interdisciplinary approach to teaching. Units were written by teams of teachers who then worked together to implement them. This varied the teaching style and approach to the material for all students, but it did not deal with learning styles of individuals. Everyone received the same presentation and participated in the same activities.

In the 1980's several theories of differentiated learning styles were coming to the fore in education. In 1983 Howard Gardner's book, *Frames of the Mind: Theories of Multiple Intelligences*, was first published. It was published again in 1993, on the tenth anniversary, as a special issue. In this book Mr. Gardner states:

“In the heyday of the psychometric and behaviorist eras, it was generally believed that intelligence was a single entity that was inherited; and that human beings - initially a blank slate - could be trained to learn anything, provided that it was presented in an appropriate way. Nowadays an increasing number of researchers believe precisely the opposite; that there exists a multitude of intelligences, quite independent of each other; that each intelligence has its own strengths and constraints; that the mind is far from unencumbered at birth; and that it is unexpectedly difficult to teach things that go against early 'naive' theories of that challenge the natural lines of force within an intelligence and its matching domains.” (Gardner 1993: xxiii)

Howard Gardner outlined seven types of intelligence: linguistic, logical-mathematical, musical, spatial, body-kinesthetic, intrapersonal and interpersonal. Each of these can be linked to the learning process. Linguistic intelligence relates to the spoken and written

word. This type of learner has the ability to learn languages and is able to use language effectively. Students who might fall into this category love to read, are good spellers and are good listeners. Writers, poets, lawyers, and speakers would be categorized by Gardner as having high linguistic intelligence. The next is logical-mathematical intelligence which describes learners who are good problem solvers, logical thinkers and strong math students. Students in this category need a structured and organized learning environment. Scientists, computer programmers, and inventors could be in this group. Third is musical intelligence which entails skill in the performing arts and skill in writing. These students can see patterns in what they read and what they write. Poetry and prose are both ways to get these learners involved. The fourth intelligence is bodily-kinesthetic intelligence. This group of learners needs to be active and involved in the classroom in order to learn. They use their bodies to help process information. Young students may count on their fingers. Older learners may need to use manipulative blocks to reinforce math concepts. Spatial intelligence is the next category and relates to visual perceptions of patterns. Learners in this group like to build puzzles, draw diagrams, and read books with illustrations to help them understand material. The last two intelligences deal with the learner as communicator. Interpersonal intelligence relates to those who work best in a group. They can be the leader or an active member. They enjoy discussion and can work in a busy, noisy atmosphere. Intrapersonal intelligence is used to describe the student who would rather work alone and needs a quiet place to think and study. These students enjoy independent projects, journal writing and are good test takers. This new look at how students learn gave birth to other theories of learning styles

In 1984 David Kolb wrote a book entitled "*Experiential Learning: Experience as the Source of Learning and Development*", which outlined his theory of learning styles. He defined four learning styles: diverging, assimilating, converging, and accommodating. His theories reflect the old Chinese proverb, "Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand." (Confucius, 450 BC). According to Kolb, diverging learners take in the information around them and then use it in their own way. They like to brainstorm, do research, and use their imagination. They enjoy group work and tend to be artistic personalities. Assimilating learners are logical thinkers who need organization. They prefer teacher-centered classes. They are good in math and science and like to stick to the facts. Converging learners like practical learning. They will take abstract concepts and relate them to the real world in order to facilitate learning. They work best alone when given time to explore and discover in the classroom. The accommodating learning style relates to students who need hands-on experiences to benefit from a class. They like to work in groups, but need clear objectives to remain on task. Most learners can easily identify with one of Kolb's styles.

David Keirsey also worked in the 1980's and based his explanation of learning styles on individual temperament. Keirsey's theory was based on the ancient beliefs that people fit into four personality humors. Keirsey applied this to learning and did much of his work with gifted students. He believed that it was very important to recognize the differences in how people learn. "There is much to be gained by appreciating differences, and much to be lost by ignoring them or condemning them." (Keirsey,4) The four categories of temperament are artisans, guardians, idealists and rationalists. Artisans are

referred to with the code letters “SP” for sensing and perceiving. These types of learners like to have freedom to pursue their own interests. They are self-motivated and enjoy opportunities like the science fair and other optional contests in school. The guardians are coded as “SJ”, meaning sensing and judging. Students of this temperament are the model students in the classroom. These students learn the rules for work and behavior and strive to be perfect in following rules and directions. They thrive on organization and rubrics for assignments. The idealists are referred to as “NF”, meaning intuitive and feeling. They need to relate to learning on a personal level. They learn for personal growth and are not competitive. The rationalists are listed as “NT”, for intuitive and thinking. These students have a desire to learn in order to reach a competence level. Grades and scores are important to them. They need feedback for all class activities. Many well known personalities can be labeled with one of Kiersey’s temperaments and reading about these people and comparing oneself to them, is a way to identify which category into which one might fit.

In 1996 the work of Rita Dunn was used from grade school to college to help learners find their dominant learning style. She defined learning style as the “way in which each learner begins to concentrate on, process and retain new and difficult information.” (Dunn). She worked with many aspects of learning styles. However, the one most relevant to my curriculum is the work she did with modalities. She identified four learning modalities: Auditory, Visual, Tactual, and Kinesthetic. Students with an auditory strength learn by listening in a quiet environment where the teacher gives verbal instructions to the class. A visual learner learns best when the teacher demonstrates rather than lectures. Visual learners are not affected by noise in the classroom, but do need to see examples. Modeling and diagrams help them learn. The tactual learner needs to take notes or jot down ideas when getting directions. They prefer involvement in hands-on activities rather than watching demonstrations. Kinesthetic learners are active and cannot be given long, detailed instructions all at once. They have a high energy level and need to be mobile in the classroom. Most teachers can determine these categories through observation and conferencing with students.

All of these modern theories of learning styles have tools by which to measure the style of the learner. Some are self-reflective. Some are in survey form and some are very open ended.

In determining the type of learner based on the seven multiple intelligences it is important to remember that most people will combine and overlap within the categories. The best way to determine which type of intelligence influences learning the most is through classroom activities with teacher observation. Suggested activities will be dealt with in that section of the curriculum. Generally the activities revolve around presenting similar content in different ways over a period of time and observing the behavior of the student. Holding student conferences would then allow the teacher an opportunity to tell the student what was observed. The student together with the teacher could formulate an opinion of the best learning style of that student.

In order to determine the type of experiential learner that a student might be an inventory can be administered. It is called the Kolb Learning Style Inventory and comes

in a prepared booklet. It takes about twenty minutes to complete and is geared to older students and adults. Kolb inventories are often used in business to help people who must work in teams to determine their personal style. There are other products besides the paper inventories like charts and floor maps that can be used to assess a person's style. I plan to use some sample questions from the inventory and the chart to help my students determine their experiential learning style.

David Keirseay provides a website to assist in finding the temperamental learning styles of individuals. This site provides descriptions of the temperaments and lists famous historical figures that would have been categorized as artisan, guardian, idealist or rationalist. Visitors to the website can read the descriptions and match them with famous people as they try to determine where they might fit in. There is a DVD entitled "Please Understand Me" that can be used to show the impact of temperament on various aspects of life, including education. In his book, *Please Understand Me II*, there is a temperament sorter which can be reviewed to get an idea of one's temperament. I plan to use the website with my students and show segments of the DVD as a way of helping them discover which temperament might best describe them.

Rita Dunn has written several teacher resource books that deal with how to teach content to students through their individual learning styles. These workbook type publications do not provide an assessment tool for determining types of learners. While an inventory could be used, teacher observation and interaction can determine the type of learners in a classroom. All content can then be geared to cover the auditory, visual, tactile and kinesthetic learners in each class. In her book, *Bringing Out the Giftedness in Your Child*, Rita Dunn provides sample learning style profiles that can be used to determine learning preferences. (Dunn 142-161) I plan to observe and question students to determine what style learner they are according to the four categories.

After the students have compiled a learner profile for themselves I plan to introduce the concept of meta-cognition and basics of memoir writing. The idea of thinking about thinking was termed meta-cognition by several researchers; one of whom was John Flavell in 1987. Meta-cognition refers to a process that makes the learner aware of thinking. When engaged in this process a student will ask herself questions about learning. How will I approach this task? Do I understand the material that I am reading? How is my progress so far.? Teachers who introduce this type of process in the classroom usually have very successful learners. Flavell divided meta-cognitive knowledge into three areas: knowledge of personal variables, knowledge of task variables, and knowledge of strategies. Personal variables deal directly with learning styles. A successful learner must know themselves. Task variables deal with what type of task is being done, a writing assignment, a reading assignment or a hands-on experiment. How much time is given to complete the task is also a variable. Strategies deal with tools used by the learner to facilitate higher level thinking such as self-questioning, rereading. In general meta-cognition deals with personal planning, monitoring, problem solving, and evaluating.

The last aspect of the curriculum will be the writing component. This curriculum will use the form of a reflective journal. Reflective writing “looks back on experiences, finds patterns in them and organizes them, and then finds meaning in them.” (Bomer, p 10). A journal is an ongoing series of entries that relate events and reflect on them. It is more formal than a diary and less formal than a memoir. People have been writing journals throughout history. Many journals have turned into books of historical fiction. In classrooms journals can be used to start the day or to end it. Many teachers use prompts that help writers to focus. Others use free writing as a way to write in a journal. Personally, many people use journaling as a kind of therapy and families now write in journals as a way to remember events and the feelings that accompanied them. As a technique for writing across the curriculum, journals are kept. These various types of journaling can all be employed as part of this curriculum.

Objectives

The objectives of this curriculum fall into three categories. First is that the student will identify the ways in which they feel most comfortable learning. Second is that the student will reflect upon prior learning and what it has meant to them. Third is that students will write about ongoing learning experiences during the school year. The behavioral objectives are:

The student will be able to explain several ways in which learning can take place.

The student will be able to complete activities that will help them to determine their personal learning style.

The student will be able to score and evaluate several processes for determining learning styles.

The student will be able to discover their own preferred learning style and relate that information to everyday learning.

The student will become familiar with the concept of meta-cognition and its implications for deeper learning.

The student will be able to communicate in written and oral language about the learning processes they have experienced so far in their personal growth.

It is my hope that journaling will provide my student with a chance to know themselves better, to evaluate their learning and to reflect on the experiences in my class,

Strategies

The teaching experience in the Pittsburgh Gifted Center is unique. The students are scheduled according to their academic strengths. I teach science, so the students I see each week all have a high interest in science and an above average ability in solving

problems. Students come to the center one day each week and spend two hours in their strength class. I plan to use this curriculum with my morning strength class beginning in September. It will be used as an introduction to the gifted center learning experience. For the first month of school I will introduce and discuss the four models of learning styles previously mentioned in this unit. Each week's class will consist of a presentation on the elements of the model and a discussion of how each student relates to it. I plan to conduct an activity related to each learning style that will engage the students. Next I will use an assessment tool to allow the students to find out what their learning styles are. The four tools will be adaptations of the formal tests that can be taken to assess learning styles.

After the first month of school I will discuss meta-cognition. Students at the elementary level love to learn and use complicated vocabulary. I plan to have them do several activities to illustrate what is meant by meta-cognition. Next, I plan to introduce journal writing as a way to delve deeper into learning styles. Student journals will provide me with information about the student and allow the student to know themselves better.

During the course of the school year the students will continue journaling as they are exposed to new content material.

Classroom Activities:

Seven Intelligences

In order to present the seven intelligences student will draw a stick figure on paper. Using pencils and highlighters the class will fill in the figure. The figure will be used as a diagram of the seven categories of intelligence. Review each intelligence with the class. Start with linguistic intelligence and have the student write the word on the mouth part of the stick figure. Linguistic intelligence describes a person who likes to read. This type of learner also enjoys listening and remembers what is said. This student is strong in humanities and successful as a writer. Move on to logical mathematic intelligence and have the student put the term on the upper part of the body's head. Logical mathematical describes a person who is strong in math and enjoys problem solving. This type of student likes to do brain teasers. This learner looks for patterns. They are usually interested in science. Next is the musical intelligence which describes a person who has a talent for singing or playing a musical instrument. This student may like to hum or tap while working in class or doing homework. This person remembers jingles, melodies and songs. The students should write the word musical on the left arm of the stick figure. Spatial intelligence describes people who appreciate art. They are people who like to draw or doodle. They recognize shapes easily and like to do jigsaw puzzles. They like books with illustrations. Students should write the term, spatial on the right arm of the stick figure. The next intelligence is bodily-kinesthetic. This describes learners who like to be involved in sports. They might find it difficult to sit for extended periods of time. They like the outdoors and like the thrill of amusement park rides. They learn best by doing rather than listening or watching in class. The student should write the term bodily kinesthetic on the waist of the stick figure. Interpersonal intelligence describes students who like to work in groups. They like to be the leader in the group and will start discussions among the other students. These students are outgoing and make friends

easily. The students should write the word, interpersonal below the stick figure. The last intelligence is intrapersonal. This describes students who like to work alone and at their own pace. They may be quiet or shy in a group. They can be strong-willed and independent personalities. Students should put the term intrapersonal between the bottom line of the stick figure. A sample figure can be found in Appendix A. After reviewing the seven intelligences, the students will use crayons to shade over the words to which they most relate. Students can color one intelligence to describe themselves or up to three. Use different colors to delineate the intelligences.

Linguistic/Red

Logical-Mathematical/Green

Musical/ Blue

Spatial/Orange

Body-Kinesthetic/Yellow

Intrapersonal/Purple

Interpersonal/ Pink

It is important to stress to students that the intelligences may overlap or blend together. A person can utilize several intelligences while learning content material and participating in class activities.

Experiential Learning

Prepare index cards or pieces of paper using 4 different colors. Each color will represent a learning style. The cards should be blank. Read off one adjective at a time from the adjectives that describe that particular learning style. The teacher will say and explain one adjective, such as, sensitive. Any student who thinks they are a sensitive learner will take a yellow card. Continue on until all twelve words have been said and explained. Now have the students study and analyze their colored cards. The color that they have the most of is their dominant learning style. Students may have an array of colored cards. This does not matter because the styles overlap and merge, just as the intelligences did. The adjectives to be read are listed below:

Diverging learners are sensitive, imaginative, emotional, and artistic.

Assimilating learners are logical, observant, thoughtful, and creative

Converging learners are practical, focused, serious, and independent

Accommodating learners are active, instinctive, outgoing, and friendly

Conclude with a discussion of the learning types of Kolb compared to the seven intelligences of Gardener.

Temperaments

To introduce students to the theory that personal temperament affects learning, have them discuss the four temperaments: artisan, guardian, idealist and rationalist. Explain Keirsey's coding for each one and review the meanings of the codes. A diagram of the temperaments and the codes can be found in the appendices. After the discussion, put the following famous quotes on the board and have the students decide if they are the words of an artisan, guardian, idealist or rationalist:

"Learning is power." (Sir Frances Bacon) Rationalist

"Character is much easier kept than recovered." (Thomas Paine) Idealist

"Taste is the enemy of creativeness." (Pablo Picasso) Artisan

“Let no one ever come to you without leaving better and happier”

(Mother Teresa) Guardian

Pass out the diagram found in the appendices. Show the DVD entitled *Understand Me*. As students watch the film they should take notes in the boxes on the sheet marked Appendix B. They may write any ideas that strike them as meaningful. They can list some of the people who fall into the category. They can make sketches in the boxes to represent the categories.

After viewing the DVD, have students visit the Kiersey website. Let them read the descriptions of each temperament, the subcategories of each temperament, and the famous figures who fit into the temperament. At the end of the class session, have the students use a red crayon to shade in the temperament that most describes their personality. Then use a blue crayon to shade in any other temperaments that might also describe their personality. Have students decide on no more than two temperaments to shade in. To end this session read the story about the *Wizard of Oz* characters found in the book, *Please Understand Me II*. (Keirse, 17)

Learning Styles

Explain the four modalities: auditory, visual, tactile, and kinesthetic by using a picture book. There are many good books to choose from for this activity. “*Bright and Early Thursday Evening*” by Audrey and Don Wood is an excellent book to use for this exercise. First, play a tape of the book or have students close their eyes while it is read. Next, show the pictures in the book as you read it. Then have each student read a page as the book is passed around the classroom. Lastly, have the students act out the words on the page as you read them to the class. Ask the students to rank the ways that the book was approached from one to four. One is the most comfortable to them and four being the least. Give students the questionnaire about learning styles available in the appendices. I have adapted ideas and formulated questions based on several formal assessments available today. The five questions on Appendix C will help each student decide if they are a visual, tactile, auditory or kinesthetic learner or a combination. Discuss the results of the survey with each student individually in a conference.

Meta-cognition

Hold a class discussion reviewing the four theories covered so far in the curriculum. Have the students think about how they learn. Explain that thinking about thinking is a sophisticated concept that is called meta-cognition. Have students make an information web about the term. Write any idea, word, or phrase that comes to mind when thinking about thinking. Words might include brain, learning, seeing, problems, intelligence, and/or personality.

Explain that meta-cognition is directly related to awareness of learning style and that students have been practicing this high level of thinking for the past four weeks. Tell students that they will now use meta-cognition to write about how they learned in the past and are learning in the present, by developing a learning journal. Each student will be given a special notebook to use for their personal writings.

Learning Journals/Immersion

In order to present the idea of a learning journal, I am adapting two lessons from Katherine Bomer's book, *Writing a Life*. In her book, Bomer explains the idea of immersion. Immersion is the process of experiencing the genre in which the student will be writing. Reading examples of memoirs about how people learned and their experiences in education will be invaluable. Read from the book *Looking Back* by Lois Lowrey. The entry entitled, "1943", is a good example of writing about an event. (Lowrey,63) Another story to share with the class is from the book *When I Was Your Age*. Read the story entitled "Muffin" by Susan Cooper. (Erich, 78). This story deals with events at school. Other suggested books are listed in the annotated bibliography for students.

Learning Journals/ Generating

In this lesson the students will be given "a portion of time to simply brainstorm, or generate ideas for writing." (Bomer, 29) This time will be at the beginning of the class session. Students will be able to page through the books that were read during the previous class session and are now displayed in the room. This unstructured writing will still have the focus of learning styles. Students should think about what they learned about themselves in the previous sessions that dealt with learning styles. In this first writing experience students can list adjectives about themselves, make sketches of their classroom, write notes about a favorite teacher, their first day of school or anything that comes to mind about their learning experiences.

Everyday Learning Journals

Now the class is ready to use the journals each day as a meta-cognitive tool to learn more about themselves. After the immersion and generating processes are complete, at the conclusion of each science class, students will be given time to write in their learning journals. They may use prompts to help them. They may also choose to write the journal as a diary of what happened that day in class, or as a message to me about how they are doing in class. The prompts can be posted in the room. Example prompts might include: Did anything we did in class today remind you of a previous learning experience? Tell me about it.

Describe what skills you used in completing today's activities?

Can you relate this lesson to something you have done before? How are they the same/different?

I plan to use journaling throughout the school year and I am excited about trying this technique of information sharing with my students. I believe the process will be a way for me to know each student better, and then, to- better meet their educational needs.

Annotated Bibliography for Teachers

Books

Berry, Joy Wilt. *Every Kid's Guide to Thinking and Learning*, Chicago, Childrens Press, 1987.

Written for children this book explores how students can determine their own learning style. There are informal assessments in an easy to read text.

Bomer, Katherine. *Writing A Life*, Heinemann, Portsmouth, N.H., 2005.

This book is a guide to teaching memoir writing. It contains examples of writing and suggested readings for students.

Claxton, Charles. *Learning Styles: Implications for Improving Educational Practices*, College Station, TX, Association for the Study of Higher Education, 1987.

This is a book contains many practical suggestions for teachers dealing with a variety of learning styles in a classroom

Coil, Carolyn. *Encouraging Achievement*, Marion, IL, Pieces of Learning, 1999.

This is a book of strategies and learning activities to be used with students who may be gifted but are underachieving. Learning styles are discussed thoroughly.

Gardener, Howard. *Frames of the Mind: Theories of Multiple Intelligence*, Basic Books, New York, N.Y., 1993.

This book explains in detail the theory of the seven intelligences. It is a resource for any study of the theory.

Goleman, Daniel. *Emotional Intelligence*. Bantam Books, New York, 1995.

This is a book that describes the theory of emotional intelligence in great detail and explains the important of self-awareness in learning.

Keirsey, David. *Please Understand Me II*, Prometheus Nemesis Book Company, Del Mar, CA, 1998.

This book explains the temperaments in detail and provides temperament sorters to match traits and values to temperament categories.

Kolb, David. *Experiential Learning: Experience as the Source of Learning and Development*, F.T. Press, Utah. 1993.

This book explains the theory of experiential learning and provides tables, charts and diagrams to illustrate the various learning styles.

Johnson, Nancy. *Active Questioning*, U.S.A. Pieces of Learning, 1995.

This is primarily a workbook that discussing questioning techniques that can be used with learners to tap into their creativity.

Liatta, Christine. *The Dramatically Different Classroom: multiple intelligences across the Curriculum*, San Clemente, CA, Kagan Publishers, 2002

This book contains suggestions and strategies for utilizing a variety of teaching methods to deal with the multiple intelligences and varied learning styles.

Pauley, Judith. *Here's How to Reach Me: matching instruction to personality types in your classroom*, Baltimore MD, PH. Bookes Publishing Co, 2002.

This book provides sample lessons to meet the needs of all learning types. It contains explanations of strategies that can be used in the classroom.

Rogers, Karen. *Re-forming Gifted Education*, Scottsdale, AZ:Great Potential Press, Inc,2002.

This book provides interest and attitude surveys to assess learning preferences on gifted students.

Winebrenner, Susan. *Teaching Gifted Kids in the Regular Classroom*, Minneapolis, MN, Free Spirit Publishing, 2001.

This is a cross curriculum workbook filled with activities and lessons for gifted students.

Websites

Armstrong, Thomas, *Multiple Intelligences*, 2000

http://www.thomasarmstrong.com/multiple_intelligences.htm

This site explains in detail the theory of Howard Gardener. It lists resources from other sites and books.

Goleman, Daniel, *Emotional Intelligence*, 2006

<http://www.danielgoleman.info/ei/index.html>

This site contains information about the theory of emotional intelligence. It follows the precepts outlined in the book by the same name.

Keirsey, David, *Keirsey.com*, 2006.

<http://www.keirsey.com/>

This is a website dedicated to the theory of temperaments in learning. It provides temperament sorters and examples of famous people who fall into one of the four temperaments.

Rose, Colin, *Accelerated Learning*, 1987,
<http://www.chaminade.org/inspire/learnstl.htm>

This site provides a chart to review different learning styles. It can be used to match strategies to learners.

Teaching Styles, 2007
http://vudat.msu.edu/teach_styles/

This site provides tools for assessing one's teaching style. It gives insights into how to meet the needs of many types of learners.

Annotated Bibliography for Students

Books

Ehrlich, Amy. *When I was Your Age*, Candlewick Press, Cambridge MA., 1996.
This book is a collection of memoirs about growing up.

Lansky, Bruce. *No More Homework! No More Tests!* Simon and Schuster, New York, 1997. This is a collection of humorous poems about school.

Levine, Ellen. *I Hate English*, Scholastic Inc., New York, 1989.
This is a picture book about a Chinese student and her experience with her English teacher.

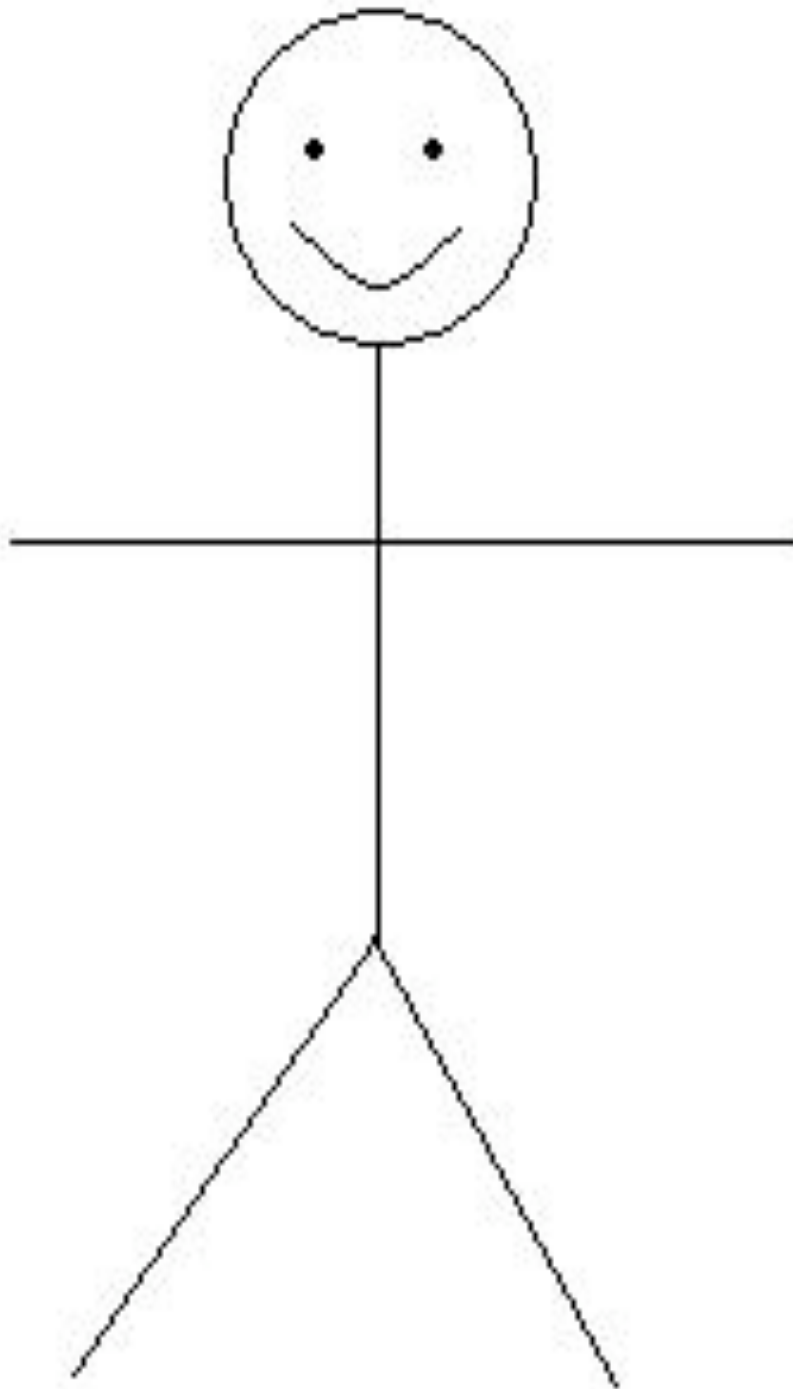
Lowry, Lois. *Looking Back*. Houghton Mifflin Company, 1998.
This book is a collection of old photographs and stories that relate to the photos. It is written in the first person and is easy to read.

Price, Olive. *Three Golden Rivers*, Golden Triangle Press, Pittsburgh PA. 1999.
This book presents the story of four children growing up in Pittsburgh in the 1850's. This work of historical fiction can be used as an example of a type of memoir.

Stevenson, James. *When I was Nine*, Greenwillow Books, New York.
This is a picture book set in pre-World War II that reads like a young boy's diary. His feelings and emotions help the reader to get a picture of what life was like at the time.

Wood, Audrey and Don. *Bright and Early Thursday Evening*, Harcourt Brace, New York, N.Y., 1996.
This is a picture book of fantasy to help inspire creativity in its readers.

Appendix A



Appendix B

<p>Artisan SP Sensing and Perceiving</p>	<p>Guardian SJ Sensing and Judging</p>
<p>Idealist NF Intuitive and Feeling</p>	<p>Rationalist NF Intuitive and Thinking</p>

Appendix C

Learning Style Questionnaire

Rank the presentation of the book in the order in which you liked the best to the least. One is the best and four is the least.

Listening_____

Watching and listening_____

Passing and reading_____

Acting out the story_____

Directions: Circle the answer that best describes you.

1. When I hear music I usually
 - Sing along
 - See images in my head as I listen
 - Dance or move my feet
 - Drum or tap my fingers

2. If given blank paper I would probably
 - Draw a picture of an object or person
 - Doodle
 - Write my name on it
 - Fold it into something

3. In science class I like to
 - Listen to the teacher explain the material
 - Discuss the topic with the class
 - Watch a movie about the material
 - Do an experiment

4. To remember the spelling of a word I usually
 - Write it over and over
 - Say it out loud
 - Read it again and again
 - Tap out a beat to the letters or syllable

5. When I am upset I usually
 - Get quiet
 - Scream
 - Stomp
 - Wring my hands

Standards

1. All students read and use a variety of methods to make sense of various kinds of complex text.
2. All students respond orally and in writing to information and ideas gained by reading narrative and informational texts and use the information and ideas to make decisions and solve problems.
3. All students write for a variety of purposes, including narrate, inform, and persuade, in all subjects.
4. All students exchange information orally, including understanding and giving spoken instructions, asking and answering questions appropriately, and promoting effective group communications.
5. All students listen to and understand complex oral messages and identify the purpose, structure and use.
6. All students compose and make oral presentations for each academic area of study that are designed to persuade, inform or describe.