Principle 2

Understands how children learn and develop:

The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Looks like, Feels like, and Sounds like:

Uses developmentally appropriate expectations; determines students' readiness to learn by accounting for visual, auditory, kinesthetic learning styles; incorporates and honors multiple ways of demonstrating understanding through all of the multiple intelligences; uses questioning techniques to probe for understanding, rather than simply asking 'do you understand?''; takes time to discuss 'misperceptions' or incorrect responses; allows students to learn from each other

Learning Styles

This chart helps you determine your learning style; read the word in the left column and then answer the questions in the successive three columns to see how you respond to each situation. Your answers may fall into three columns, but one column will likely contain the most answers. The dominant column indicates your primary learning style.

When you…	**Visual**	**Auditory**	**Kinesthetic & Tactile**
Spell	Do you try to see the word?	Do you sound out the word or use a phonetic approach?	Do you write the word down to find if it feels right?
Talk	Do you sparingly but dislike listening for too long? Do you favor words such as see, picture, and imagine?	Do you enjoy listening but are impatient to talk? Do you use words such as hear, tune, and think?	Do you gesture and use expressive movements? Do you use words such as feel, tough, and hold?
Concentrate	Do you become distracted by untidiness or movement?	Do you become distracted by sounds or noises?	Do you become distracted by activity around you?
Meet someone again	Do you forget names but remember faces or remember where you met?	Do you forget faces but remember names or remember what you talked about?	Do you remember best what you did together?
Contact people on business	Do you prefer direct, face-to-face, personal meetings?	Do you prefer the telephone?	Do you talk with them while walking or participating in an activity?
Read	Do you like descriptive scenes or pause to imagine the actions?	Do you enjoy dialog and conversation or hear the characters talk?	Do you prefer action stories or are not a keen reader?
Do something new at work	Do you like to see demonstrations, diagrams, slides, or posters?	Do you prefer verbal instructions or talking about it with someone else?	Do you prefer to jump right in and try it?
Put something together	Do you look at the directions and the picture?	Do you have someone else read the directions to you as you work?	Do you ignore the directions and figure it out as you go along?
Need help with a computer application	Do you seek out pictures or diagrams?	Do you call the help desk, ask a neighbor, or growl at the computer?	Do you keep trying to do it or try it on another computer?

Adapted from Colin rose (1987). Accelerated Learning.

Multiple Intelligences and Lifelong Learning

Image	Short-hand	Type	Characteristics	Careers
	Word Smart	Verbal/ Linguistic	Understanding order and meaning of words; convincing someone of a course of action; explaining, teaching and learning; humor; memory and recall; meta-linguistic analysis	Writer Lawyer Teacher/Professor Reporter Song writer
	Logic Smart	Logical/ Mathematical	Abstract pattern recognition; inductive reasoning; discerning relationships and connections; data-based decision making; ordering and arranging facts into sequence; determining priority	Scientist Mathematician Engineer Research analyst Designer
	Music Smart	Musical/ Rhythmic	Structure of music, schemas for hearing music; sensitivity to sounds; creating melody/rhythm; sensing qualities of a tone; deriving meaning or information through listening	Musician Composer Conductor Recording Engineer Music Industry
	Body Smart	Bodily/ Kinesthetic	Control of voluntary movements; control of pre-programmed movements; expanding body awareness and expression; mimetic abilities; physical movement expertise	Athlete Dancer Surgeon/Doctor Crafts Person Physical Therapist
	Picture Smart	Visual/ Spatial	Perceiving from different angles; recognizing spatial relationships; graphic representation; image manipulation; finding your way in space; forming mental images; active imagination	Painter/Sculptor Interior Decorator Architect Photographer Pilot
	People Smart	Interpersonal	Sensing perspective of others; working cooperatively in a group; making distinction among others; desire to interact with others; non-verbal communications and body language	Teacher Social Worker Actor/Actress Politician Salesperson
	Self Smart	Intrapersonal	Concentration of the mind; mindfulness; meta-cognition; awareness and expression of different feelings; sense of the self; higher order thinking and reasoning	Psychologist Spiritual Leader Philosopher Therapist Artist (all art forms)
	Nature Smart	Naturalistic	Aware of environment; interest in feature of the natural world; enjoyment of outdoors; awareness of animals and plants; interest in conservation; sensitivity to weather	Forrester Farmer Meteorologist Geologist Photographer
	Spirit Smart	Existential	Focus on pondering and asking questions about life, death, and ultimate realities; emphasis on universal truths, personal freedom, responsibility and the consequences of one's actions	Minister/Rabbi Priest/Shaman Psychoanalyst Spiritual leader Philosopher

THE MULTIPLE INTELLIGENCES

I am BODILY-KINESTHETIC.
I am body smart. I learn by doing. I use body language to express myself.
I like physical movements and hands-on activities.

I am EXISTENTIAL.
I am spirit smart. I am a realist. I ponder about life and death.
I believe in being responsible for the consequences of one's actions.

I am INTERPERSONAL.
I am people smart. I enjoy time with friends. I like to share.
I work cooperatively in a group.

I am INTRAPERSONAL.
I am self-smart. I like to spend time by myself. I am in touch with my moods and feelings. I
learn through observing.

I am LOGICAL-MATHEMATICAL.
I am logic smart. I like working with numbers. I like to know how things work.
I enjoy asking questions, analyzing situations, arranging and sequencing facts.

I am MUSCIAL-RHYTHMIC.
I am sound smart.   I enjoy singing, dancing, listening to and playing music. I create and
replicate tunes. I match my feelings to music and rhythm.

I am NATURALIST.
I am nature smart. I like to spend time outdoors. I enjoy observing wildlife and sea life. I like
to study how plants and animals grow.

I am VERBAL-LINGUISTIC.
I am word smart. I like to read, write, and describe events.   I like teaching and learning.
I like to immerse myself in study of diverse languages.

I am VISUAL-SPATIAL.
I am image smart. I like to paint, draw, and work with clay. I enjoy looking at maps.
I like to play with puzzles and complete mazes.

Compiled by Dr. Cole 07/06

MULTIPLE INTELLIGENCES SURVEY

Part I

Complete each section by placing a "1" next to each statement you feel accurately describes you. If you do not identify with a statement, leave the space provided blank. Then total the column in each section.

Section 1

_____ I enjoy categorizing things by common traits
_____ Ecological issues are important to me
_____ Classification helps me make sense of new data
_____ I enjoy working in a garden
_____ I believe preserving our National Parks is important
_____ Putting things in hierarchies makes sense to me
_____ Animals are important in my life
_____ My home has a recycling system in place
_____ I enjoy studying biology, botany and/or zoology
_____ I pick up on subtle differences in meaning

_____ TOTAL for Section 1

Section 2

_____ I easily pick up on patterns
_____ I focus in on noise and sounds
_____ Moving to a beat is easy for me
_____ I enjoy making music
_____ I respond to the cadence of poetry
_____ I remember things by putting them in a rhyme
_____ Concentration is difficult for me if there is background noise
_____ Listening to sounds in nature can be very relaxing
_____ Musicals are more engagingto me than dramatic plays
_____ Remembering song lyrics is easy for me

_____ TOTAL for Section 2

Section 3

_____ I am known for being neat and orderly
_____ Step-by-step directions are a big help
_____ Problem solving comes easily to me
_____ I get easily frustrated with disorganized people

_____ I can complete calculations quickly in my head
_____ Logic puzzles are fun
_____ I can't begin an assignment until I have all my "ducks in a row"
_____ Structure is a good thing
_____ I enjoy troubleshooting something that isn't working properly
_____ Things have to make sense to me or I am dissatisfied

_____ TOTAL for Section 3

Section 4

_____ It is important to see my role in the "big picture" of things
_____ I enjoy discussing questions about life
_____ Religion is important to me
_____ I enjoy viewing art work
_____ Relaxation and meditation exercises are rewarding to me
_____ I like traveling to visit inspiring places
_____ I enjoy reading philosophers
_____ Learning new things is easier when I see their real world application
_____ I wonder if there are other forms of intelligent life in the universe
_____ It is important for me to feel connected to people, ideas and beliefs

_____ TOTAL for Section 4

Section 5

_____ I learn best interacting with others
_____ I enjoy informal chat and serious discussion
_____ The more the merrier
_____ I often serve as a leader among peers and colleagues
_____ I value relationships more than ideas or accomplishments
_____ Study groups are very productive for me
_____ I am a "team player"
_____ Friends are important to me
_____ I belong to more than three clubs or organizations
_____ I dislike working alone

_____ TOTAL for Section 5

Section 6

_____ I learn by doing
_____ I enjoy making things with my hands
_____ Sports are a part of my life
_____ I use gestures and non-verbal cues when I communicate
_____ Demonstrating is better than explaining
_____ I love to dance
_____ I like working with tools
_____ Inactivity can make me more tired than being very busy
_____ Hands-on activities are fun
_____ I live an active lifestyle

_____ TOTAL for Section 6

Section 7

_____ Foreign languages interest me
_____ I enjoy reading books, magazines and web sites
_____ I keep a journal
_____ Word puzzles like crosswords or jumbles are enjoyable
_____ Taking notes helps me remember and understand
_____ I faithfully contact friends through letters and/or e-mail
_____ It is easy for me to explain my ideas to others
_____ I write for pleasure
_____ Puns, anagrams and spoonerisms are fun
_____ I enjoy public speaking and participating in debates

_____ TOTAL for Section 7

Section 8

_____ My attitude effects how I learn
_____ I like to be involved in causes that help others
_____ I am keenly aware of my moral beliefs
_____ I learn best when I have an emotional attachment to the subject
_____ Fairness is important to me
_____ Social justice issues interest me
_____ Working alone can be just as productive as working in a group
_____ I need to know why I should do something before I agree to do it
_____ When I believe in something I give more effort towards it
_____ I am willing to protest or sign a petition to right a wrong

_____ TOTAL for Section 8

Section 9

_____ Rearranging a room and redecorating are fun for me
_____ I enjoy creating my own works of art
_____ I remember better using graphic organizers
_____ I enjoy all kinds of entertainment media
_____ Charts, graphs and tables help me interpret data
_____ A music video can make me more interested in a song
_____ I can recall things as mental pictures
_____ I am good at reading maps and blueprints
_____ Three dimensional puzzles are fun
_____ I can visualize ideas in my mind

_____ TOTAL for Section 9

Part II

Now carry forward your total from each section and multiply by 10 below:

Section	Total Forward	Multiply	Score
1		X10	
2		X10	
3		X10	
4		X10	
5		X10	
6		X10	
7		X10	
8		X10	
9		X10	

Part III

Now plot your scores on the bar graph provided:

Part IV

	Sec 1	Sec 2	Sec 3	Sec 4	Sec 5	Sec 6	Sec 7	Sec 8	Sec 9
100									
90									
80									
70									
60									
50									
40									
30									
20									
10									
0									

Key:

Section 1 – This reflects your Naturalist strength
Section 2 – This suggests your Musical strength
Section 3 – This indicates your Logical strength
Section 4 – This illustrates your Existential strength
Section 5 – This shows your Interpersonal strength
Section 6 – This tells your Kinesthetic strength
Section 7 – This indicates your Verbal strength
Section 8 – This reflects your Intrapersonal strength
Section 9 – This suggests your Visual strength

Remember:

- Everyone has all the intelligences!
- You can strengthen each intelligence!
- This inventory is meant as a snapshot in time - it can change!

MI is meant to empower, not label learners!

What is the theory of multiple intelligences (M.I.)?

www.thirteen.org/edonline

"An intelligence is the ability to solve problems or to create products that are valued within one or more critical settings."

- Howard Gardner, FRAMES OF MIND (1983)

Howard Gardner claims that all human beings have multiple intelligences. These multiple intelligences can be nurtured and strengthened, or ignored and weakened. He believes each individual has nine intelligences:

1. Verbal-Linguistic Intelligence – well-developed verbal skills and sensitivity to the sounds, meanings and rhythms of words

2. Mathematical-Logical Intelligence – ability to think conceptually and abstractly, and capacity to discern logical or numerical patterns

3. Musical Intelligence – ability to produce and appreciate rhythm, pitch and timber

4. Visual-Spatial Intelligence – capacity to think in images and pictures, to visualize accurately and abstractly

5. Bodily-Kinesthetic Intelligence – ability to control one's body movements and to handle objects skillfully

6. Interpersonal Intelligence – capacity to detect and respond appropriately to the moods, motivations and desires of others

7. Intrapersonal Intelligence – capacity to be self-aware and in tune with inner feelings, values, beliefs and thinking processes

8. Naturalist Intelligence – ability to recognize and categorize plants, animals and other objects in nature

9. Existential Intelligence – sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we dies, and how did we get here.

According to Gardner,

- All human beings possess all nine intelligences in varying amounts.
- Each person has a difference intellectual composition.
- We can improve education by addressing the multiple intelligences of our students.
- These intelligences are located in different areas of the brain and can either work independently or together.
- These intelligences may define the human species.

MULTIPLE INTELLIGENCES THEORY: CLASSROOM APPLICATIONS

There are many different ways to apply multiple intelligences theory in the classroom. You probably employ a variety of intelligences already. At all levels of education, teachers are transforming subject-specific lessons and curriculum units into meaningful M.I. experiences.

- History courses study periods associated with music and art.
- Science units incorporate visual, musical and kinesthetic experiences.
- Language arts classes reading Civil War literature visit reenactments and build a topographical map.

As educators explore more effective methods of assessment, they frequently encourage their students to demonstrate understanding through M.I. activities.

- Elementary school students compose and perform songs about math concepts which satisfy the rubrics they and their teachers have developed.
- Middle school students create multimedia presentations combining animations, MIDI compositions, and writing to satisfy interdisciplinary unit requirements.
- High school students demonstrate mastery of self-formulated research questions through art, writing portfolios, and giving speeches before panels of local citizens.

Multiple Intelligence Type	Incorporated into subject matter	Way of demonstrating understanding
Verbal-Linguistic	Books, stories, poetry, speeches, author visits	Writing stories, scripts, poems, storytelling
Mathematical-Logical	Exercises, drills, problem-solving	Counting calculating, theorizing, demonstrating, programming computers
Musical	Tapes, CD's, concert going	Performing, singing, playing, composing
Visual-Spatial	Posters, art work, slides, charts, graphs, video tapes, laser disks, CD-ROMs and DVDs, museum visits	Drawing, painting, illustrating, graphic design, collage making, poster making, photography
Bodily-Kinesthetic	Movies, animations, exercises, physicalizing concepts, rhythm exercises	Dance recital, athletic performance or competition
Interpersonal	Reflection time, meditation exercises	Plays, debates, panels, group work
Intrapersonal	Reflection time, meditation exercises	Journals, memoirs, diaries, changing behaviors, habits, personal growth
Naturalist	Terrariums, aquariums, class pets, farm, botanical garden and zoo visits, nature walks, museum visits	Collecting, classifying, caring for animals at nature centers
Existential	Working on causes, charity work, astrology charts	Community service

The ultimate goal of M.I. theory – to increase student understanding – is something for which good teachers have long striven. Excellent educators have always addressed the needs of their variously intelligent students. In this sense the real values of M.I. theory are:

- To legitimize the powerful and wide-reaching curricula many teachers have always delivered.
- To systematize and broadcast the theory and methodology of an enriched curriculum.

Classroom activities frequently activate and utilize more than one of the multiple intelligences. Now consider how you would add to and interpret the items on the following list:

- **Group discussion** – Verbal-Linguistic; Interpersonal
- **Journal writing** – Intrapersonal; Verbal/Linguistic
- **Choreography** – Musical-Rhythmic; Verbal-Linguistic; Interpersonal
- **Constructing timelines** – Logical-Mathematical; Visual-Spatial
- **Putting on a play** – Musical-Rhythmic; Verbal/Linguistic; Interpersonal; Visual-Spatial
- **Making a video** – Logical-Mathematical; Musical-Rhythmic; Verbal/Linguistic; Interpersonal; Visual-Spatial
- **Writing a report or essay** – Verbal-Linguistic
- **Making graphs** – Logical-Mathematical; Visual-Spatial
- **Designing posters** – Verbal-Linguistic; Visual-Spatial
- **Communicating with peers or experts online** – Verbal-Linguistic; Interpersonal
- **Hands-on experimentation** – Kinesthetic; Logical/Mathematical
- **Composing a song** – Musical/Rhythmic; Verbal-Linguistic
- **Building a model or 3-D displays** – Kinesthetic; Logical-Mathematical