A.1 Educational Philosophy

Our school follows the educational philosophies developed by Maria Montessori. This includes providing a prepared environment of learning materials that entice a child to experience learning in an atmosphere of peaceful community. We believe that each child best progresses in learning when allowed a degree of freedom, within an ordered environment, to progress at his or her own pace. In our classrooms, each child is encouraged to develop a love of learning that will carry on through later years.

Our methods seek to nurture the growth and development of each child socially, academically and emotionally during his or her early school experiences. This is facilitated through use of mixed age grouping. We intend to serve children ranging from five years through eight years in age. In our environment, younger children will benefit from having older peers as role models and tutors. This ensures that each child learns at his/her own pace, although it is the teacher who sets each child's agenda. Children will always be able to find a peer who is working at their level.

A core principle of Montessori education is that the teacher is not the primary focus of the classroom; the child is the focal point. It fills the need for children to be taught as individuals. The lessons are given in very small groups with materials designed to target many different learning styles at once. Materials provided within the classroom allow for practice within any given subject in several different formats. Children use these distinct systems until feeling comfortable enough with the topic to move onto the next level of work. These exercises are logically build upon one another, transitioning the application of what is learned to new areas and establishing a great sense of accomplishment and confidence within the child.

A key concept in this philosophy is that older peers have already experienced lesson presentations and individual practice with the materials. This enables them to assist younger schoolchildren with daily work. They may teach lessons or help check work and correct errors, which fosters high-levels of cognitive ability. Thereby, these students become the classroom leaders and derive both subject mastery and joy from teaching younger learners. This virtuous cycle perpetuates itself as the younger children look up to the older ones as role models and the older children look forward to the opportunity to be mentors.

The Montessori philosophy of teaching is the only pedagogy that was developed, studied, and research for the longest period of time by one person. Maria Montessori was first an anthropologist, and doctor, trained to observe and apply scientific discoveries to those observations. She was a scientist before she was an educator. By observing, making changes, and then observing some more, she let the children teach her, rather than pushing her own ideas on them.

For fifty years Maria herself observed children in from various socio-economic areas, ages, abilities, and parts of the world. Her findings led her to create a method of teaching that focuses on the child as an individual, and forms the child as a whole, helping them to realize their place in the universe. Montessori based her methods on her work with children, developing schools, the teaching method, curriculum, didactic materials, parent education, teacher training, and social action in the community.

Dr. Montessori developed her methods without the aid of today's technology. Today, in 2010 brain research indicates that cognitive development is greatest when motor movements are repeated, and that the hands are a child's strongest link to the brain. Maria is quoted as saying "never give to the hand more than the brain can handle". Children in a Montessori

classroom are able to master information more quickly because of the repetition of activities, multisensory materials, and self-guided learning. Maria Montessori also spoke of the “absorbent mind” of a child being like a sponge, soaking up what they see and do.

The recent discovery of mirror neurons in neurology research, show the importance of learning by example or imitation. A child who watches another child demonstrate a work is having neural pathways strengthened even though they are not physically completing the work themselves. A Montessori classroom constantly has numerous activities being done by children of different ages and abilities, allowing other students to benefit by watching and being a part of the environment. Pediatric neuropsychologist Dr. Steven Hughes refers to Montessori as “the original brain-based method of learning”.

In 2005, Angeline Lillard conducted an analysis of students’ academic and social scores comparing a Montessori school with other elementary school education program. The journal *Science* published a well-designed study that found some measurable advantages for the Montessori Method. The researchers compared 59 Montessori students with 53 traditionally educated students who'd tried to get in to a public Montessori school in Wisconsin and lost out in a lottery (a strategy that addressed the methodological concern that families who choose Montessori differ from those who do not choose Montessori). By the end of kindergarten, the Montessori students outscored the traditionally schooled students on standardized tests of reading and math, treated each other better on the playground, and "showed more concern for fairness and justice." By the end of elementary school, the test-score gap closed. But the Montessori kids "wrote more creative essays with more complex sentence structures," responded better to social dilemmas, and were more likely to say they felt a sense of community at school.

The Wisconsin school in the study was urban and mostly minority. That's a contrast to the private and upscale cast of Montessori in the United States. But that norm is starting to change, with between 250 and 300 public Montessori schools now open across the country in varing socio-economic landscapes. Maria Montessori started her revolution among Italy's pauper children, so it makes sense that her method is effective without the head start of affluence. (www.sciencemag.org)

Greenhouse Montessori School chose the Montessori approach because it enables the children to form solid relationships and a true sense of community with both their peers and their teachers. It also helps develop independence and autonomy in the older child, something that is often lacking in traditional settings. Ultimately, we believe in this approach because the evidence of success of Montessori education continues to rise. In the Phoenix area alone, eight out of twelve Montessori charter elementary schools are rated as “Excelling”, with another two rated “Performing Plus” (table below).

Charter Montessori Elementary Schools in the Phoenix Area

2009 Data from www.GreatSchools.com

School	City	Grades Served	AZ LEARNS Profile 2008-09
Caurus Academy ('Montessori Inspired')	Phoenix	K-8	Excelling
Keystone Montessori Charter School	Phoenix	1-9	Excelling
Khalsa Montessori School	Phoenix	K-6	Excelling
Mission Montessori	Scottsdale	K-7	Excelling
Montessori Academy	Scottsdale	K-8	Excelling
Montessori Day Schools Lakeshore	Chandler	K-8	Excelling
Montessori Education Centre Charter School	Mesa	K-6	Excelling
Villa Montessori	Phoenix	K-8	Excelling
Arizona Montessori Charter School at Anthem	Anthem	K-8	Performing Plus
Esperanza Montessori Academy	Phoenix	K-3	Performing Plus
Montessori Education Centre Charter School	Mesa	K-9	Performing
Montessori House Charter School	Mesa	K-6	Performing

The cognitive research of Harvard's Howard Gardner identifies seven distinct intelligences including visual-spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, linguistic and logical. Gardner says that these differences "challenge an educational system that assumes that everyone can learn the same materials in the same way and that a uniform, universal measure suffices to test student learning. Indeed, as currently constituted, our educational system is heavily biased toward linguistic modes of instruction and assessment and, to a somewhat lesser degree, toward logical-quantitative modes as well." Gardner argues that "a contrasting set of assumptions is more likely to be educationally effective. Students learn in ways that are identifiably distinctive. The broad spectrum of students - and perhaps the society as a whole - would be better served if disciplines could be presented in a numbers of ways and learning could be assessed through a variety of means."[1]

For those that are familiar with Montessori methods, it is self-evident that these different learning styles are woven into the very fabric of its education. While most every lesson involves verbal instruction, children also experience hands-on, bodily, learning using tangible, real objects that teach a combination of cognitive and motor skills. In everyday situations they communicate cooperatively, solve puzzles, read maps, touch and smell lesson materials. They use real tools and real objects to make things. Sound and music are often incorporated into

[1] *"The Distance Learning Technology Resource Guide," by Carla Lane*

lessons. Interpersonal interaction occurs throughout the entire day as children help coach one another while simultaneously practicing linguistic skills freely. Montessori even matches the more introverted learners as they can be taught through independent, logical, study and introspection. Such children may choose to work alone for stretches of time and learn more from books in a manner that permits them to develop in a more independent fashion.

In summary, over and above academic achievement, we feel that developing bright, open and lively students will be evidence of our school's success. The Montessori Method has been practiced for decades in many languages and cultures all around the world. Our experience operating a private Montessori preschool, with a waiting list of attendees, supports the argument that our proposed approach is highly-desired and needed by the community we seek to serve.