

ARROWSMITH PROGRAM PROSPECTUS

Some Practical Aspects of Implementing the Arrowsmith Program in Schools

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Introduction

This Prospectus has been prepared for administrators and educators in the publicly funded school system and in private schools who are interested in learning about the practical aspects of bringing the Arrowsmith Program into their boards and schools.

We hope that it will be of interest to school principals, board supervisors and administrators, school trustees and teachers in the publicly funded system as well as private school directors, administrators and teachers who may have read or heard about the Arrowsmith Program but have not had an opportunity to visit a school where our program is being offered.

This Prospectus does not deal with the methodology of the Arrowsmith Program or the research that has been conducted on it. We invite those who may not be familiar with this to

read the introduction contained in the Arrowsmith Program brochure and on our website at www.arrowsmithschool.org including more detailed descriptions of the learning dysfunctions that are addressed by our program, research conducted on the Arrowsmith Program, and the article in September, 2008 issue of the Ontario College of Teachers magazine, Professionally Speaking.

Please also visit our website to view our introductory video and for a list of the dates of the Professional Information Sessions that are held at Arrowsmith School throughout the year and provide visitors with an opportunity to observe students working on the Arrowsmith Program exercises. We will be pleased to schedule a visit at a different time for small groups that are unable to attend one of the regularly scheduled sessions.

What the Arrowsmith Program involves

The Arrowsmith Program comprises a suite of cognitive exercises for students with learning disabilities that was developed from research in the field of neuroscience and has been used at Arrowsmith School in Toronto for 30 years. Each cognitive exercise has multiple levels of difficulty and is designed to address a specific area of cognitive functioning.

It is available at Arrowsmith School in Toronto and Arrowsmith School Peterborough, for the past 10 years in seven schools in the Toronto Catholic District School Board, and in private schools in Canada and the United States.

The Arrowsmith Program is available only to schools in the publicly funded school system and to established independent and private schools. Students work for a minimum of four periods per day, five days a week for three or four years on cognitive exercises designed specifically for their areas of learning disability following which they return to a full academic curriculum.

All grade levels are accommodated in the Arrowsmith classroom with students rotating in and out to academic classes. The Arrowsmith periods do not need to be consecutive. It is an educational program, not a clinical or treatment program, that needs to be delivered in a school environment by trained Arrowsmith teachers.

Walking into an Arrowsmith Program classroom is not much different from walking into any other classroom. The age range may be a little wider and the cognitive exercises may look different from the regular academic curriculum. The students have the same needs and enthusiasms and require the same dedicated and trained teachers as every other student.

The goal of the Arrowsmith Program is to identify, intervene, and strengthen the weak cognitive capacities that affect learning. Students are able to capitalize on their increased learning capacities and after a three to four year program will be reintegrated into the full curriculum where they can function without further special education assistance or program accommodations.

How the Arrowsmith Program is delivered

Each student is placed on an individualized program based on his or her individual learning profile. Each cognitive exercise has a series of intensive and graduated tasks designed to strengthen a specific learning capacity.

Performance evaluation criteria are built into each of the cognitive exercises based on the principles of accuracy, consistency, and automaticity of performance. A student must meet these criteria in order to master each level of a cognitive exercise before advancing to a more difficult level. The program is modified throughout the year based on the student's progress through the cognitive exercise program.

The cognitive exercises are delivered in three formats:

- ***Pen and paper exercises*** that improve the cognitive capacities required for motor skills related to the mechanical aspect of writing, skills required for written communication, organization and planning, and skills required for non-verbal communication
- ***Auditory exercises*** to improve short and long term auditory memory, phonemic memory, oral and written output and vocabulary development and to increase the ability to hold and process information (working memory)
- ***Computer exercises*** to strengthen the ability to reason, use logic, and comprehend, as well as exercises for strengthening numeracy skills, reading, and visual memory for symbol patterns and face and landmark recognition

Students - who is the Arrowsmith Program designed for

The typical student in the Arrowsmith Program is of average or above average intelligence, does not have severe intellectual, cognitive, emotional or behavioural disorders that would significantly affect his or her ability to participate in the Arrowsmith Program and does not have acquired brain injury or an autism spectrum disorder.

The student will have a combination of the learning dysfunctions that are described in the descriptions of learning dysfunctions in our brochure and on our web site.

Teachers - recruiting and the summer training course

Each Arrowsmith Program teacher must successfully complete the Arrowsmith teacher training course, which is an intensive three-week course that is designed to provide the theoretical background and practical skills necessary to deliver the Arrowsmith Program.

The course is delivered at Arrowsmith School in Toronto during the last week of July and the first two weeks of August.

Candidates for the teacher training course are selected by the school in consultation with Arrowsmith. Each school or school board may have their own additional requirements for academic training and professional qualifications. The teachers are employees of the school that is offering the Arrowsmith Program and sign a non-disclosure and confidentiality agreement with Arrowsmith.

Agreement with Arrowsmith Program and fees

Each school enters into a similar form of school agreement, in Canada with Arrowsmith Program Inc. that operates the Arrowsmith Program in Canada, and in the United States with Arrowsmith Program U.S. Inc. that operates the Arrowsmith Program in the United States. Both companies are federally incorporated Canadian companies that are affiliates of Arrowsmith School.

The agreement renews automatically at the end of the first year and each subsequent year and may be canceled without penalty by the school at the end of each school year.

The program fee includes full access to the Arrowsmith Program cognitive exercise methodology and exercise materials, initial student assessment and assessment in subsequent years using the Arrowsmith Program Web-based Assessment and the creation of an Individual Learning Profile and program of individual cognitive exercises for each student, monitoring through the on-line Record of Program and ongoing support and professional development for teachers based on a minimum enrolment of 10 students per school.

The fee per student remains the same irrespective of the number of periods per day and number of exercise programs that the student is working on. There is no initial fee and there are no charges apart from the fee for the teacher training course and program fees which are payable in two installments during the school year.

The program fee includes the fee for assessing all new students using the Arrowsmith Web-based Assessment in the initial year and all subsequent years.

We are required to charge Goods and Services Tax on all fees charged to schools in Canada. There is no Goods and Services Tax charged to schools in the United States.

The tuition for students enrolled in the Arrowsmith Program at a private or independent school in Canada may qualify as a medical expense for the purposes of the Medical Expense Tax Credit under the Income Tax Act of Canada. Further information about this is available on the Arrowsmith website.

Classroom set-up, supplies and equipment

Schools offering the Arrowsmith Program provide a self-contained classroom for the exclusive use of the Arrowsmith students. The teacher to student ratio is one Arrowsmith trained teacher for each group of approximately 10 students. Overall class size is not limited to 10 students and larger groups may be accommodated in the same classroom provided the same teacher to student ratio is maintained.

Schools will need to arrange for the provision of exercise materials to be printed from master copies provided by Arrowsmith, and equipment and other supplies as set out in further detail below. The schools should budget for an approximate cost per student of consumable supplies in a range of \$300 to \$400 per year.

Administration of the Arrowsmith Program

Admissions and determining who is appropriate

The decision as to whether a student who is experiencing difficulty at school may be appropriate for the Arrowsmith Program can usually be made based on discussion, by telephone or in person, with parents and teachers or in the case of older students, with the students themselves. Our experience has shown that most parents can identify with great accuracy the problems that their child is having at school.

The schools make the decision based on their knowledge of the type of student who may benefit from the Arrowsmith

Program. The Arrowsmith Program Coordinator is available for consultation with the Arrowsmith teacher at the school on the admissions process.

Schools and school boards may have their own additional criteria and policies for admission to the school and into the Arrowsmith Program. The Program Coordinator is available to consult with the school on the appropriateness of the Arrowsmith Program for any particular student.

Enrolment process

Once a decision has been made to enroll a student in the Arrowsmith Program, the school forwards an enrolment form and Arrowsmith assigns a student number and provides a link to the Web-based Assessment which allows the Arrowsmith teacher to complete the assessment.

Parents are required to sign a form consenting to the release to Arrowsmith of information that may be considered confidential such as assessment results and

communications concerning student progress and an acknowledgment that they have obtained sufficient information to make an informed decision about enrolling their child in the Arrowsmith Program. This form is retained at the school.

The student remains a student of the school and there is no contractual agreement between the families of Arrowsmith Program students and Arrowsmith Program.

Web-based Assessment

The assessment of each student is conducted at the school by the Arrowsmith teacher using a web-based program developed by Arrowsmith that assesses the cognitive strengths and weakness of the student. The initial assessment is conducted as soon as the student enrolls and there is a further assessment at the end of each school year. The assessment takes about a full day to complete for each student and is scheduled by the school at a time convenient to the student and his or her family.

The Arrowsmith teachers are fully trained in the use of the web-based assessment during the teacher training course. The assessment process is guided by the web-

based program and the teacher enters the student's responses as it progresses.

It is efficient and easy to use and also incorporates a separate rating scale containing a number of questions that can be completed by the parent, a teacher or the students themselves, as the circumstances require.

When complete, the assessment results are transmitted to Arrowsmith in an encrypted format using a secure link and this is used to produce an Individual Learning Profile for each student describing the student's cognitive strengths and weaknesses, which allows Arrowsmith Program to create an individualized program of cognitive exercises for each student.

Programming of student exercises and program length

The purpose of the assessment is to identify the strengths and weaknesses in the student's cognitive areas to create an Individual Learning Profile, which is used as the basis for designing an individualized program of cognitive exercises to meet the learning needs of each student.

The purpose of the assessment is not to determine suitability for the program but to provide the information that is necessary for programming and to determine the levels at which the student should start each exercise.

The year-end assessment enables Arrowsmith to modify the student's program of cognitive exercises for the

following year and to create a revised learning profile based on improvements in the specific cognitive areas being addressed.

The initial Individual Learning Profile determines the approximate number of years that the student will require of the Arrowsmith Program, with most students requiring three to four years in the program.

The fee for the assessments, including the initial assessment and year end assessments, is included in the annual fee for each student.

Web-based Record of Program

The quantity and quality of each student's work on each exercise of his or her individual program is entered at the end of each month by the Arrowsmith teacher on a web-based Record of Program and is reviewed by the Program Coordinator to ensure that each student is progressing at an appropriate level measured against benchmark goals for each exercise.

Program Coordinator

Arrowsmith assigns a Program Coordinator to each school who acts as the liaison between Arrowsmith Program and the Arrowsmith classroom teacher at the school. The Program Coordinator is responsible for monitoring the progress of each student using the Record of Program.

The Arrowsmith Program Coordinator is available during school hours to answer questions and provide on-going education, professional development and feedback in the delivery of the Arrowsmith Program. The Program Coordinator is available to provide assistance and advice in the selection of teachers and the admission of students who are appropriate for the Arrowsmith Program.

Responsibilities of the Arrowsmith Program teacher

Each Arrowsmith Program teacher must successfully complete the training course and is responsible for:

- implementing the program in accordance with the procedures established by Arrowsmith in the training course and Reference Manual and as periodically revised and updated by Arrowsmith
- conducting the Web-based Assessment for each student enrolled in the program including initial and year end assessments
- tracking and entering student progress on a monthly basis in the Record of Program
- participating in ongoing professional development provided by Arrowsmith
- participating in the selection of appropriate students in accordance with the policies of their school and in consultation with the Program Coordinator
- ensuring that all materials that the students require are prepared, organized and maintained in accordance with Arrowsmith procedures
- reporting to parents in accordance with the policies of their school and Arrowsmith procedures in consultation, as required, with the Program Coordinator
- keeping parents informed and aware of their child's progress and homework responsibilities and monthly goals

Teacher training and professional development

The teacher training course is a three week course delivered at Arrowsmith School in Toronto during the last week of July and first two weeks of August for all new teachers in the Arrowsmith Program. The course introduces them to the theory and methodology of the Arrowsmith Program. It includes a combination of lectures, small group seminars and work groups and hands on practice in implementing the Arrowsmith cognitive exercises.

The course is based on the Arrowsmith Program Reference Manual which contains detailed instructions

on the proper method of delivery for each Arrowsmith Program cognitive exercise. The Reference Manual is revised and refined annually and each site is provided with a copy.

Arrowsmith also provides professional development seminars throughout the year that are delivered by video conference and over the web as well as ongoing updates on program developments.

Classroom Structure

All grade levels are accommodated in the Arrowsmith classroom with students rotating in and out to academic classes. Arrowsmith periods are not necessarily consecutive but require the Arrowsmith Program teacher and the student's academic teacher (or teachers) to create an appropriate schedule.

Students will usually spend four to six periods per day on the Arrowsmith exercises (six periods is the usual number at Arrowsmith School) and spend the remainder of the school day in an age appropriate class for instruction in other school subjects. Students may spend as many as

eight periods per day, or as few as one or two periods when the student is nearing completion of the program and is functioning well in the age appropriate academic class and there are only one or two areas requiring further programming.

The number of periods will depend on the individual student's need and school board regulations. Arrowsmith Program requires an initial commitment of four periods per day, five days per week for each student enrolled in the Arrowsmith Program.

Equipment and supplies provided by the school and costs

Each school is responsible for providing the following:

- one computer for every two students equipped with Windows 2000 or later operating system including a CD drive and USB port
- one computer equipped with Windows XP or later operating system, sound card and external speakers, and high speed internet access for the Arrowsmith Program Web-based Assessment and on-line Record of Program including CD burner and a laser printer available for teacher use in the Arrowsmith Program classroom
- a unique school email address for sending links for the web-based assessment
- one MP3 player and headphones for every two students
- printed exercise materials (including tracing sheets and exercise booklets) printed by the school from Arrowsmith masters - approximately \$300 to \$400 per student (the cost will vary according to quantity used by each student and size of the printing order)
- miscellaneous supplies - approximately \$150 per student



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