

ECO Classrooms

1997

(ECO = Environmentally Controlled Opportunity Classroom)

The intent of creating an Environmentally Controlled Opportunity classroom (ECO) is to provide an opportunity for environmentally sensitive students to attend school when they would otherwise be unable. Even though new schools may be safe for most individuals, they may not be safe for all. It is essential to include an ECO classroom in new schools to accommodate the arising need for hypersensitive students and teachers. Students who are sensitive and allergic to items in the environment can exhibit physical symptoms such as throat, ear, eye and lung irritation, muscle and joint pain, flu-like symptoms, headaches, exhaustion, tremors, light sensitivity and skin rashes. Behavioral symptoms can include depression, difficulty learning or concentrating, mood swings, hyperactivity, short term memory loss, aggression and irritability.

Exposure to items in the environment such as pollens, dust, mold, and chemicals, which can be tolerated by most individuals, can seriously affect an environmentally sensitive child. Due to an accumulated hypersensitivity, these children are not just allergic to one thing, but many. Their immune systems have been compromised or suppressed, so that they react to numerous things in the environment. With each exposure, they become more sensitive, so eventually, they react to very minute portions of the allergen. These children need to be provided with a classroom that has been built with the least toxic materials, is free of allergens, and contains a separate ventilation unit, as well as air purifiers.

The first ECO classrooms to be built in Canada were in the Waterloo District in 1985. Doug Morris, Superintendent of Special Education was instrumental in establishing these classrooms. In 1993 there were six facilities in operation at the elementary and secondary level. By 1994, several school districts in Ontario had made significant changes in their environmental practices to improve the air quality in their schools.

The first students to be chosen for these classrooms were students who were on a home study program. Within months of attending these classrooms, students made significant improvement in their attendance and academic performance. Not only did their grades improve, but so did their behavior, activity levels and self-esteem. Many of the part-time students in the ECO classrooms were able to be integrated back into the regular classroom with great success.

Dr. Doris Rapp makes the following observations about ECO classrooms in a presentation at the National Conference on Children with Sensitivities in Ottawa in 1996:

You are very fortunate in this particular area of the country because in Halton and in Kitchener you have environmentally safe classrooms. You are leaders in the whole world in Canada in respect to this. In those schools they have found that they have increased the academic performance, improved the attendance, decreased the illness, taken children from home teaching and they are now able to go to school. (1)

Students on home study should be the first students to be considered to attend an ECO classroom. Admittance on a part time basis should also be considered. It may be necessary to establish a committee to decide the criteria for admittance to this type of classroom. Following are some considerations in establishing an ECO classroom.

Program Goals

1. To provide a self-contained environmentally controlled classroom for students.
2. To provide access to all regular programs and activity with peers, to the degree appropriate for each individual.

Program Objectives

1. To design and implement an appropriate educational program for each student.
2. To further accommodate the special health needs of students in the program.
3. To facilitate the involvement of students within regular classroom programs.
4. To assess each student's progress on a continuous basis.
5. To assist and support parents in securing the involvement of health care professionals for guidance and home environment modifications.
6. To act as a resource to students, parents, teachers and administration regarding ecological sensitivities.

Human Resources

One teacher to instruct a maximum of twelve students. (grade primary - 6)

One teacher to instruct a maximum of eight students. (grade level 7 - 12)

Program Planning Team

This team should include:

- school administration
- teachers
- school psychologist
- public health nurse
- parents

Referral and Assessment Procedures

Consideration is given to the following:

- students who are on a home study program
- medical evaluation
- parent support and involvement
- student's responsibility for self and others
- educational assessment

Curriculum Needs

Each student will follow the regular curriculum with necessary adaptations to accommodate their individual sensitivities in consultation with the Program Planning Team.

Design Features and Materials

- a separate self-contained temperature/ humidity controlled and HEPA filtered ventilation system that will maintain a positive air pressure within the classroom
- ceramic tile flooring and concrete walls with low-toxicity paint
- ceiling panels, hardwood furniture, shelving manipulative items sealed with low-toxicity finish
- full-spectrum lighting or electronic ballast with T-8 lamps
- filtered water supply stored in a glass container
- metal window blinds
- private attached washroom (where this is not possible, special consideration must be taken for cleaning products used in public washrooms as well as the distance from the classroom)
- refrigeration unit
- white boards and low-toxicity bulletin boards instead of chalk boards, with odorless, water-based markers
- hypo-allergenic floor mats and cotton futons for napping

- high-quality room air purifiers to remove dust, molds, pollen and other air particles
- a portable oxygen tank for the initial treatment of minor accidental chemical exposures
- a computer, printer and internet services
- a telecommunication unit which could access other classrooms such as science labs would be ideal
- books should be older rather than new, if this is not possible textbooks should be baked at 100 degrees Fahrenheit for five hours, then aired
- no moldy books
- glass boxes may needed for viewing books
- signs outside the classroom should prohibit anyone from entering who smells of perfume, smoke or chemicals

Classroom Guidelines

1. Lunches are stored and consumed in the ECO classroom, with no sharing of food unless authorized.
2. Students and teachers who enter the ECO room must:
 - wear only fragrance-free personal hygiene products or those that have been approved by the students themselves
 - refrain from the use of nail polish, anti-static products and scented fabric softeners
 - avoid the wearing of clothing exposed to cigarette smoke or other noxious fumes, freshly dry-cleaned clothes, new plastic material
 - refrain from touching pets before coming to school

Cleaning Procedures

- cleaning products used must be tolerated by all students
- cleaning should not take place while students are in the classroom
- unauthorized materials must not be used in the ECO classroom
- washrooms used by these students must be cleaned with special chemical free cleaners
- waste baskets must be emptied daily
- floors must be swept daily and mopped weekly
- all furniture and window blinds should be cleaned weekly
- the H.V.C. system must be inspected and filters changed frequently
- special maintenance that is required of the classroom must occur during break periods
- pesticides should not be used during school hours and a 24 hour notice for pesticide use should be posted
- plants should not be allowed in the classroom

Other Considerations

- separate transportation should be provided for those students who cannot travel on a bus
- this transportation should provide a smoke-free environment and should be nondiesel
- educational programs for students, staff and parents should be provided so that everyone can become aware of environmental issues
- academic and health assessment should be ongoing
- a variety of support services should be provided

Evaluation

Success not only means academic success, but involves a wide range of criteria such as attendance, self-esteem, behavioral patterns, social skills etc.

- *S. Moser, Citizens for A Safe Learning Environment*

Reference Notes:

1. Rapp, Doris. "Practical Answers to Common Learning and Health Problems: Schools, Housing and Diet." *National Conference on Children with Sensitivities sponsored by the Ottawa branch of the AEHA. June 1, 1996.*

References :

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