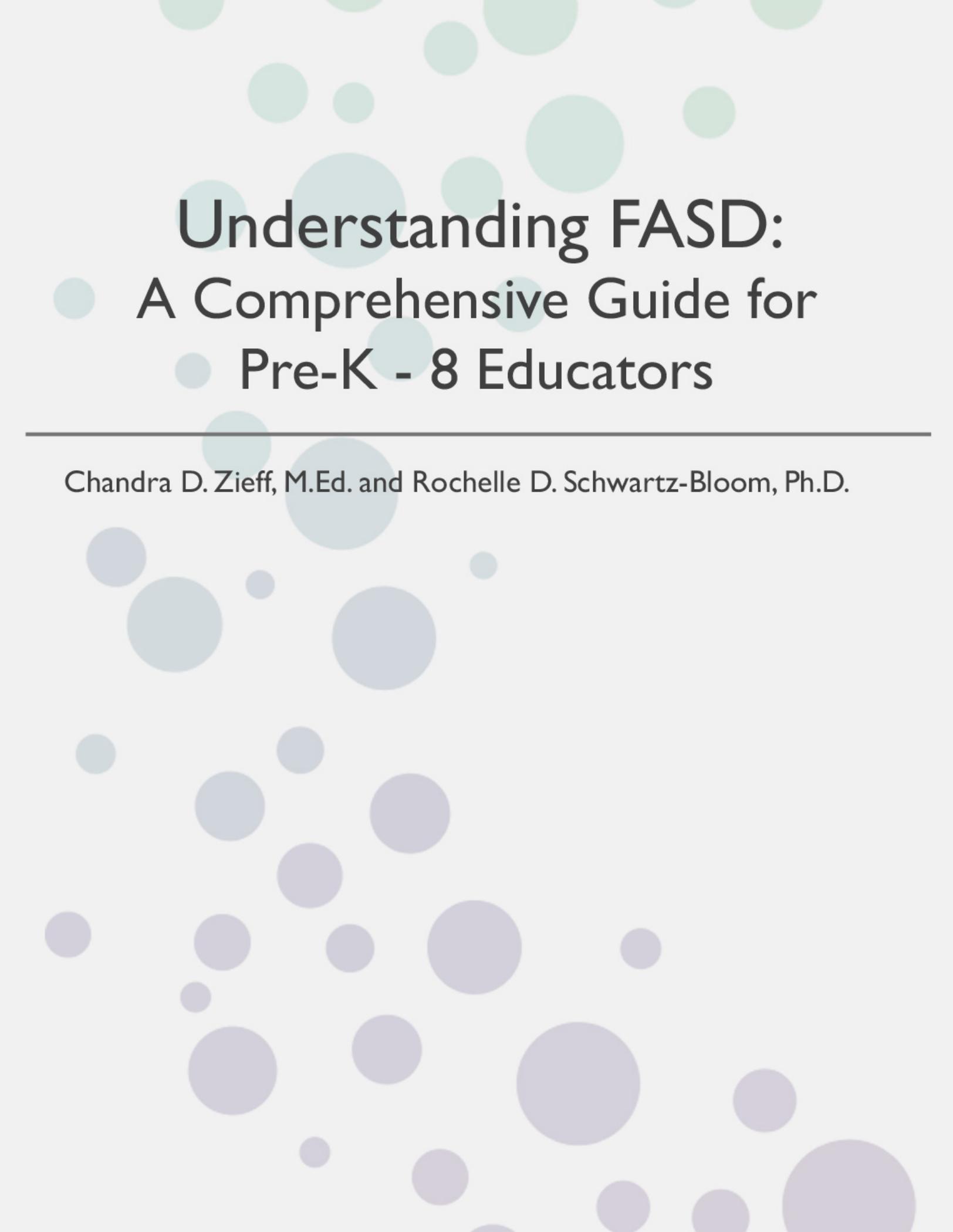


Understanding Fetal Alcohol Spectrum Disorders (FASD):

A Comprehensive Guide
for Pre-K - 8 Educators

Chandra D. Zieff, M.Ed. and Rochelle D. Schwartz-Bloom, Ph.D.

© 2008 All Rights Reserved by Chandra Zieff and Rochelle Schwartz-Bloom



Understanding FASD: A Comprehensive Guide for Pre-K - 8 Educators

Chandra D. Zieff, M.Ed. and Rochelle D. Schwartz-Bloom, Ph.D.

About the Authors

Chandra D. Zieff, M.Ed.

Chandra received an M.Ed. in Special Education at Lesley College in Boston, MA. She earned her Resource Specialist Certificate from the University of California at Hayward, and has been a Special Educator for the past 28 years. She has worked with students from preschool through adulthood specializing in learning disabilities and behavioral issues. Currently Chandra is an Educational Consultant providing educational evaluations and consultations. She works individually with students in the pre-K-8 grade level.

Rochelle D. Schwartz-Bloom, Ph.D.

Rochelle is a Professor of Pharmacology at Duke University Medical Center, where she has been teaching since 1986. Her interests lie in the effects of drugs and alcohol on brain function. She also has an active research program in science education, and is funded by the National Institutes of Health to study how science education in areas of drug and alcohol pharmacology can help high students improve in science. Rochelle has created numerous science education resources for K-12 teachers and students (www.rise.duke.edu). She is the founder and Director of the Duke Center for Science Education (www.scied.duke.edu).

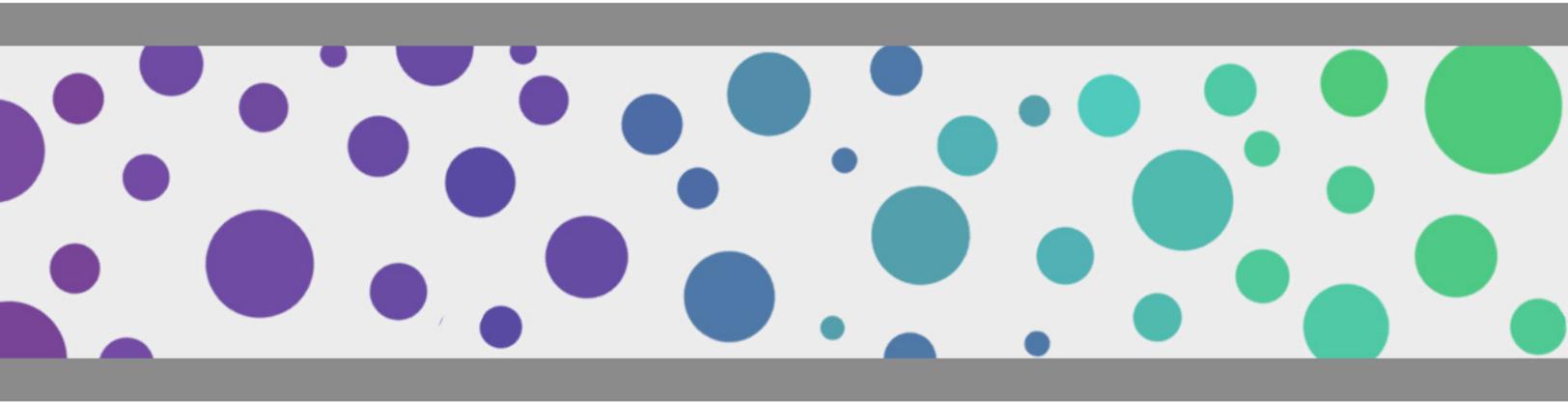
Table of Contents

Introduction	5
• What is FASD?	
• Who Should Use This Manual and the Reasons Why	
• How to Use This Manual	
Chapter 1 Physical, Neuropsychological, and Behavioral Manifestations of Children with FASD	11
• Overt Physical Symptoms	
• Neuropsychological and Behavioral Symptoms	
Chapter 2 Pattern of Prenatal Alcohol Exposure Determines the FASD Phenotype	15
• Drinking Patterns	
• Relationship Between Alcohol Exposure, Gestation Period and Damage to the Fetus	
Chapter 3 Effects of Prenatal Exposure to Alcohol on Brain Development and Postnatal Function	19
• Normal Brain Development	
• Effect of Alcohol on Brain Development	
• Brain Regions Important in Learning-related Issues	
• Brain Regions Important in Behavior-related Issues	
Chapter 4 The FASD Student and the Classroom	31
• Classroom Settings	
• Successful Classroom Environment	
Chapter 5 The FASD Student and Learning Issues	43
• Overview of Intellectual and Cognitive Abilities of the FASD Student	
• Information-Processing & Memory	
• Attention (including a chart comparing ADD/ADHD with FASD)	
• Abstract Thought & Conceptual Reasoning	
• Mathematics	
• Reading & Writing	
• Executive Function	

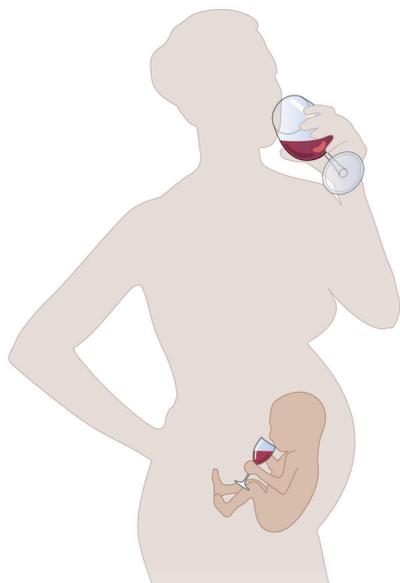
Table of Contents

Chapter 6 The FASD Student and Behavioral Issues	75
<ul style="list-style-type: none">• Overview of Behavioral Characteristics of the FASD Student• Low Self-esteem• Overly Friendly and Affectionate• Lack of Judgment• Impulsive• Confused Under Pressure• Stubborn or Oppositional	
Chapter 7 Case Study 1	97
<ul style="list-style-type: none">• The Student Study Team• Sample Individual Educational Plan (IEP)	
Chapter 8 Case Study 2	111
<ul style="list-style-type: none">• The Student Study Team• Sample Individual Educational Plan (IEP))	
Chapter 9 Strategies for Other Educational Professionals	127
<ul style="list-style-type: none">• School Administrators• School Psychologist• Resource Specialist• School Nurse• Speech & Language Specialist• Occupational Therapist• Advocate	
Appendix	135
<ul style="list-style-type: none">• Glossary• Bibliography• Resource Tools• Acknowledgements	

Introduction



What is FASD?



Fetal Alcohol Spectrum Disorder (FASD) is a group of developmental disorders that results from the exposure of a fetus to alcohol. FASD includes, Fetal Alcohol Syndrome (FAS), Partial FAS, Alcohol-Related Neurodevelopmental Disorder (ARND), and Alcohol-Related Birth Defects (ARBD). While each of these disorders includes damage to the brain that results in neuropsychological and behavioral dysfunction, FAS is the most well-known of the disorders because of the classic craniofacial dysmorphologies and growth deficiency produced by early fetal exposure to alcohol. Partial FAS does not show the growth deficits and ARBD has the physical defects of FAS without the full syndrome. ARND shows only the neuropsychological and behavioral dysfunction without the physical characteristics of FAS. FAS is the major cause of birth defects in the Western world, yet it accounts for only 10% of all the cases of FASD. Contrary to public thought, FASD children can have either a low or normal IQ. Depending on the time during pregnancy when the mother drinks alcohol as well as the drinking pattern, the facial dysmorphologies and other physical abnormalities of FAS can be absent, making a diagnosis quite difficult. In fact, children with FASD are often diagnosed with other disorders such as Attention Deficit (Hyperactivity) Disorder (ADD/ADHD) or Oppositional Defiant Disorder (ODD). Nevertheless, all children with FASD can suffer the same degree of central nervous system dysfunction and secondary effects (defined below) as do children with FAS.

Who Should Use This Manual and the Reasons Why

This guide is designed for every educator (e.g., teachers, special education teachers, resource specialists, speech and language specialists, school nurses, psychologists, and occupational therapists) who works with K-8 elementary and middle school level students. The guide addresses the impact of prenatal exposure to alcohol and how it affects the K-8 grade student. Many educators believe they do not have students in their classes who have FASD, and they may even wonder why this guide would be useful in their own teaching and classroom management.

Alcohol is the most commonly abused substance in the United States. Despite health warnings, 20% of women drink alcohol while knowing they are pregnant. Therefore, it is not surprising that there is a high incidence of children in the United States with FASD.

The most conservative estimate of the prevalence rate for FAS is 3 in 1,000; while the combined incidence of FASD is 1 in 100. In some populations, those rates are even higher. FASD occur with more frequency each year than does Down's Syndrome, Cystic Fibrosis, Spina Bifida, and Sudden Infant Death Syndrome, combined.

Students with prenatal exposure to alcohol are in our classrooms. Educators have taught and are teaching students with FASD. While a small percentage of these students have been diagnosed with one of the FASD, most of these students remain unidentified. Some students have physical characteristics indicative of FAS, most of the FASD students look like their peers. They seem "perfectly normal," yet they have a "hidden disability". Teachers are often baffled by the puzzling, and sometimes unexpected, behavior and learning difficulties these students exhibit. Working with these students can be frustrating and discouraging. Teachers find traditional learning theories and standard teaching practices ineffective for the FASD student. These students want to please their teachers, but they end up feeling like failures. There is a societal lack of awareness and understanding of FASD. These unidentified students are often misunderstood. Many reasons are attributed to the lack of success for these FASD students.

"He just doesn't try."

"He's so capable, but he's an underachiever."

"There's just not any motivation, unless it has to do with something he's interested in."

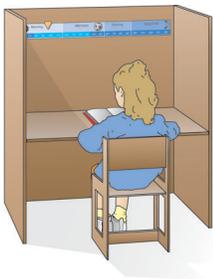
"She doesn't listen...just tunes me out."

"Her family life is very chaotic. The parenting skills are weak."

"I've never met anyone more stubborn."

"She's the class clown, always looking for attention."

The reason many FASD students are not capable of meeting age appropriate academic or behavioral expectations is through no fault of their own. They have organic brain damage, due to prenatal exposure to alcohol. While not all children whose mothers drink alcohol during pregnancy are affected, those who are affected must cope with lifelong consequences. These children do not grow out of FASD, and there is no cure.



Yet, there is reason for hope. FASD students can and do learn. In fact, FASD students are capable of leading productive and successful lives. Recognition of their disabilities and early intervention are critical in order to provide a meaningful and positive learning experience for these students. Elementary school may be the first time in a child's life when the effects of fetal alcohol exposure are noticed.

Although students with FASD have a broad range of differences, they also share very specific behaviors and learning styles. Only when teachers understand the unique profile of the FASD student can they can begin to work effectively with their students who have been identified. This profile may also alert educators to students who have not been identified with FASD, but who seemingly have many of the same behaviors and learning patterns. Educators can then seek outside help for a correct diagnosis for these students. Fetal Alcohol Spectrum Disorder requires a medical diagnosis even though there are no biochemical tests to confirm the disorder.

There are devastating secondary disabilities that manifest themselves when students have not been identified with FASD and have not received an educational program addressing these needs. These secondary disabilities are currently quite prevalent with FASD teenagers. They range from mental health problems, trouble with the law , alcohol and drug problems, sexual inappropriateness, school truancy, and homelessness to other alarming difficulties. These problems are a huge burden to the individuals, their families, as well as to society. Early recognition of FASD is the greatest factor in safeguarding against the onset of secondary disabilities.

I would like you to know that it isn't easy having FAS[D]. That it's hard in school.
I need someone to explain things in a way I'll understand.
(P. Lasser, 1999)

Understanding FASD: A Comprehensive Guide for Pre-K-8 Educators is a resource for educators who work with children with FASD. The goal of this guide is to equip educators with an overall understanding of FASD. Normal brain development and the effect of prenatal exposure to alcohol on brain development are discussed. This leads educators to understand the academic and behavioral challenges the FASD student faces. The guide outlines the profile that these students present and provides effective instructional strategies to assist teachers. Initially teachers may be overwhelmed when learning about the profile these students present, due to their extensive challenges and difficulties. Teachers may be overwhelmed further when presented with the multitude of strategies proposed here for students with FASD.

"How is it possible to implement all of these strategies?"
"These students present too many learning difficulties.
I can't possibly help them!"
"What about the other students in my classroom?
I won't have time to work with them."

Upon further reflection teachers will realize these are the students who are already consuming the most effort and energy. The FASD students are the constant targets of teachers' worry. Now, with the proper understanding and sensitivity to FASD we can stop "spinning our wheels," and begin helping these students effectively. The educator's job will be made easier.

Of all the community's institutions, the schools are most advantageously situated to influence the lives of people with FAS[D]. If schools are responsive to the challenges presented by these students, the students' lives can be greatly enhanced. If the schools fail to respond appropriately, these students can face tremendous obstacles. (Streissguth, 1997)

Teachers will discover that many of the suggested strategies will be appropriate for other students in the classroom who do not have FASD, but who exhibit similar behavioral issues. The strategies outlined in the guide will be effective for students struggling to keep up in class and for those with learning disabilities. Students who are learning English as a Second Language will also benefit from many of these suggestions. Teachers do not have to implement all of these strategies at once. The guide is designed to be a practical resource. Teachers will decide which suggestions will be best to implement for their FASD students and for their classroom.

Educators involved with FASD students should attend Student Study Team (SST) meetings. Student Study Team reports in the guide provide educators with a positive and successful SST model. The information from the reported SST often leads to the development of an Individualized Education Plan (IEP). Sample IEPs of students with FASD are presented in the guide for the educator. Educational summaries are presented along with common short and long-term goals. Educational resources and strategies are outlined to accomplish these goals. Teachers can use these sample IEPs to assist in developing meaningful and attainable IEP goals for their students. Students can work on educational goals in a supportive environment, where their disabilities are understood and they can strive for success.

In addition, the Educational Plan can establish valuable documentation for these students as they progress on to the next grade level and as they transition from the education system. With this legal document as a guide, students have the opportunity to remediate their primary disability, avoiding secondary disabilities and improving the outcome of their lives.

How to Use This Guide

The guide is organized in three major sections. The first (Chapters 1-3) presents the science behind FASD-how alcohol affects brain development to produce learning and behavioral difficulties. The second section (Chapters 4-6) covers in depth several of the neuropsychological and behavioral disabilities of students with FASD. In addition, it presents teaching strategies to address the neuropsychological and behavioral problems. There is a great deal of repetition built in to these chapters due to the overlap in approaches that can be used for different disabilities. When appropriate, the reader is referred to another section in which the topic is discussed in more detail. The third section (Chapters 7-8) presents two case studies, along with the background, the SST report and the sample IEP for each. These can be used as guides in developing your own SST reports and IEPs when appropriate. The sample cases are followed by a chapter (9) discussing the roles of other school professionals in helping the FASD student, teacher, and family work together to develop a productive learning experience at the elementary grade level.

Terms used throughout the guide are bolded when defined in the Glossary, found at the end of the manual. In addition, a list of resources for school professionals and students and their families is found after the bibliography section.