



**MAGUIRE  
ASSOCIATES**

*Advancing  
Higher Education  
Through Insight  
and Innovation*

Partnership for Reform in  
Science and Mathematics

**Framing a PRISM Public  
Awareness Campaign**  
Market Research Report Appendices

April 2005

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# Appendix I

## Research Methodology

## RESEARCH METHODOLOGY

There are to be three phases of research in support of the PRISM public awareness campaign:

- Phase I: Initial data gathering and development of strategic marketing messages;
- Phase II: Preliminary evaluation of public awareness campaign effectiveness and message refinement; and
- Phase III: Final post-test evaluation of marketing efforts.

This report summarizes the findings from the Phase I research. This market research effort included a number of important audiences and incorporated both qualitative and quantitative research methods. Qualitative research was employed as an exploratory stage in order to gather information and gain insights, which were be used to refine and inform the instruments that were then used in the quantitative research.

The Phase I research started with a Maguire team review of key materials and a kickoff meeting with PRISM leadership to further understand the goals and objectives of the research and the audiences to be included in the research. Key questions that this research sought to answer are given in the Introduction of this report.

### *Qualitative (Exploratory) Research*

In September and October of 2004, Maguire Associates conducted exploratory research for the Board of Regents of the University System of Georgia. The exploratory research included focus groups and individual interviews with a broad cross section of students, educators, and community leaders in the state of Georgia. A major thrust of this exploratory project was to identify topics and potential messages to be validated through later quantitative surveys that were administered to parents of school-aged children in the Georgia public school systems and public high school students in the state of Georgia.

The exploratory research included focus groups and individual interviews with:

- 15 elementary school students (1<sup>st</sup> -5<sup>th</sup> grade);
- 27 middle school students (6<sup>th</sup> – 8<sup>th</sup> grade);
- 89 educators in schools and school systems currently involved in PRISM pilot activities, including lead teachers, guidance counselors, principals, superintendents,

higher education professionals, and members of the PRISM leadership and evaluation teams; and

- 22 community leaders representing various informal educational and recreational programs for children, churches and religiously-affiliated schools, members of the media involved in either providing educational programming or reporting on current events in the educational community, and human resources managers in charge of hiring and training for some of Georgia's major industries.

The research scripts were developed in collaboration with the PRISM Initiative Leadership Team.

Before the research was conducted, all surveys and research procedures were carefully reviewed and approved by the Internal Review Board at Georgia Institute of Technology. A variety of means were used to recruit participants for this initial research, all of whom were drawn from schools and communities where the PRISM initiative is currently active.

- **Educators and Community Leaders:** A few educators were individually interviewed in person or by phone, but most participated in group sessions held during a statewide PRISM retreat held in Atlanta on September 9<sup>th</sup> and 10<sup>th</sup> 2004. A third of the community leaders participated in focus groups during the retreat, but most were individually interviewed by phone. A copy of the script for the executive and group interviews for educators and community leaders is found at the end of this Appendix. Participants were given a Chick-fil-A "Be Our Guest" card in appreciation for their participating in this research.
- **Elementary and Middle School Students:** Students were interviewed in small groups on-site at their schools on September 23<sup>th</sup> and 24<sup>th</sup>, 2004. The participating schools were Greer Elementary School in Savannah and Langston Chapel Middle School in Statesboro. Written consent was obtained from students' parents before their participation in the focus groups. The students were selected to represent a range of academic ability and interest in math and science, to be ethnically diverse, and to come from varied backgrounds and socioeconomic levels. The students were given a small gift certificate in appreciation for their participation, and the two schools were each given a small gift certificate in appreciation for their involvement in this research. A copy of the focus group scripts for younger and older students is found at the end of this Appendix.

### *Quantitative Research*

The information and insights collected via the exploratory research were used to develop quantitative surveys to be administered to high school students and parents of K-12 students in the Georgia public school system. The results of these surveys were to further inform the structure and breadth of a public awareness campaign by gathering additional attitudinal and behavioral data about mathematics and science.

PRISM Initiative Leadership Team recruited twelve schools to participate in the research. Participating schools were currently involved in PRISM initiatives and were located in the four PRISM pilot regions of Georgia:

- **Metropolitan Atlanta** - Atlanta Public Schools and Georgia State University
- **Northeast Georgia** - Clarke, Jackson and Oconee County School Systems, the University of Georgia, and Georgia Perimeter College
- **East Central Georgia** - Bulloch, Effingham, Evans, Liberty and Screven County School Systems and Georgia Southern University
- **Southeast Georgia** - Bryan, Camden, Chatham, and Glynn County School Systems, Armstrong Atlantic State University, and Coastal Georgia Community College

The participating schools included one elementary school, one middle school, and one high school within each of the four regions.

Feedback was sought from both students and parents at the four participating high schools, as well as from parents whose children were students at the four elementary schools and four middle schools. The overall goal was to collect surveys from approximately 1,000 high school students and 1,000 parents of school-aged students. We hoped to collect approximately equal numbers of surveys from students and parents within each of the four regions.

The research instruments were developed in collaboration with the PRISM Initiative Leadership Team.

#### *Review and Approval by Internal Review Boards*

Applications were submitted to two internal review boards for their review and approval before data collection could begin:

- the Internal Review Board at Georgia Institute of Technology; and
- the review board for the Department of Research, Planning and Accountability at the Atlanta Public School (APS) System.

Research applications included: summary of the purpose of the research, summary of our proposed methodology, student and parent survey instruments, and proposed permission letters.

As data collection could not begin until we received formal approval of our research process from the institutional review boards noted above, which took much longer than anticipated, the start of the surveys was delayed. While we had hoped to begin data collection in October (well before the holiday season and students' winter break), we did not receive final approval

from both Georgia Tech and the APS System until late November 2004, so data collection could not begin until early December 2004.

### *Recruitment of Students and Parents to Participate in the Surveys*

Since the PRISM Initiative Leadership Team could not provide contact information for the students and parents, the greatest challenge in this research was the recruitment of students and parents to participate in the surveys.

Invitation letters (or consent forms) were distributed through the 12 participating schools. Teachers and administrators at the schools were instructed to send the invitation letter home with all or an appropriate subset of the students at their school. The schools were asked to make efforts to include students and parents from a broad range of geographic, socioeconomic, and ethnic backgrounds.

The letter explained the overall purpose of the survey and gave students and their parents directions for participating in the survey. The invitation letters were on letterhead of the Board of Regents of the University System of Georgia.

Participation of the schools as well as students, teachers, and other staff members at the participating schools was voluntary. In order to enhance participation rates, a drawing for cash prizes of up to \$500 was offered to students and parents as an additional incentive to participate; however, students and parents could enter the drawing if they chose without taking part in the survey. The schools were also given a small gift of appreciation for their involvement in this research.

### *Data Collection*

The surveys were primarily administered electronically via the Internet, with students and parents being invited to visit a Web site to complete an electronic questionnaire. Students and parents were offered alternative ways to participate (paper or phone survey) should they not have access to the Internet. Paper copies of both the student and parent surveys (with postage paid envelopes) were also provided to the schools for distribution to students and parents.

The data were collected in two waves. The first wave in December 2004 fell short of our goals, so a second push to collect surveys was mounted in January 2005 after students returned from their winter break.

There was a wide range of involvement among the various schools. Some had extremely supportive leadership and were able to integrate survey participation into curricular activities or give students access to computer labs during the school day, while others were very limited in what they could do to promote the survey beyond distributing the invitation letters because of competing needs for instructional time, overlap with testing dates, and the holidays. In addition, participation in Atlanta was likely affected by the fact that the Atlanta

Public School system required written permission from students' parents before they could take part in the research.

In all, 643 high school students and 451 parents of elementary, middle and high school students participated in the surveys. See *Appendices II to V* for complete results of the surveys.

### Profiles of the Participating Schools

Region	School	Location	Number of Students	Research Participants		Setting	Ethnicity (%)		% Eligible for Free Lunch/Meals	Graduation Rate	Avg. SAT for Seniors	Avg. SAT Math
				Students	Parents		Caucasian	African-American				
Atlanta	High School	Atlanta	1021	135	1	Urban	3%	91%	71%	61%	789	401
Atlanta	Middle School	Atlanta	543	--	9	Urban	4%	88%	96%	NA	NA	NA
Atlanta	Elementary School	Atlanta	560	--	38	Urban	87%	7%	4%	NA	NA	NA
East Central	High School	Brooklet	804	121	10	Rural	80%	18%	38%	65%	942	462
East Central	Middle School	Statesboro	704	--	9	Rural	41%	53%	65%	NA	NA	NA
East Central	Elementary School	Sylvania	1257	--	17	Rural	43%	56%	81%	NA	NA	NA
Northeast	High School	Jefferson	1492	322	140	Suburban	89%	5%	29%	68%	981	495
Northeast	Middle School	Jefferson	725	--	92	Suburban	89%	4%	42%	NA	NA	NA
Northeast	Elementary School	Talmo	336	--	28	Suburban	86%	1%	61%	NA	NA	NA
Southeast	High School	Savannah	1688	64	6	Urban	36%	54%	28%	63%	939	466
Southeast	Middle School	Kingsland	1336	--	46	Urban	66%	27%	41%	NA	NA	NA
Southeast	Elementary School	Brunswick	637	--	48	Suburban	63%	31%	44%	NA	NA	NA
	Other		NA	1	7							
<b>Totals</b>				<b>643</b>	<b>451</b>							

Source: 2003-2004 Annual Report Cards on K-12 Public Schools in Georgia, except "Setting" which was provided by the PRISM Leadership.

## STATISTICAL ANALYSES

The text of this report presents highlights that emerge from the data. The annotated instruments in Appendices II and III and tables in Appendices IV and V provide a comprehensive presentation of the descriptive statistics and statistically significant findings. Several statistical methods were used to analyze the data in order to uncover important findings beyond the aggregate results.

**Descriptive Statistics** -- Most useful for summarizing results, these data are analyzed and reported as percentages of total respondents, mean (average) ratings, and standard deviations. While the mean is a measure of central tendency, the standard deviation is the average amount a score deviates from the mean.

**Chi-square** -- In the cases presented in this report, this statistic is used to determine whether or not two variables are independent of each other. In Table 4.1e, which shows the relationship between students' educational aspirations and their gender and ethnicity, the shaded area indicates a statistically significant chi-square. Within the shaded regions, percentages that are bolded denote the specific conditions under which the variables are *not* independent. In cases where there is no shading, the variables are assumed to be independent.

For example, Table 4.1e shows that the overall chi-square for gender as a function of educational aspirations is statistically significant. Further analysis reveals that a relatively high proportion of students who are not college bound are male.

*(Significant effects with low sample sizes – fewer than 10 respondents per cell – should be interpreted with caution. Cells containing fewer than 5 respondents are not discussed in the analysis due to inadequate sample size.)*

**P-Level** -- The probability level (referred to as the observed significance level) indicates whether the hypothesis that two group means are comparable can be rejected. Most of the significance testing for continuous variables reported in this volume uses a significance level of at least  $p < .01$ . A p-value of less than .01 indicates that there is less than a one percent (1%) probability that the difference between two group means is due to chance. Chi-square tests of categorical variables use a significance level of  $p < .05$ .

**Independent or Paired T-Tests** – A t-test is used to evaluate whether the mean, or average, scores of two groups are significantly different. Based on the sampling distribution, sample size, and response variance, it is possible to calculate the probability that the difference between two groups' means would be at least as large, given repeated sampling of the same population.

**Analysis of Variance (ANOVA)** – This analysis is used to evaluate whether the mean scores of more than two groups are significantly different. As with the t-test analysis, based on the sampling distribution, sample size, and response variance, it is possible to calculate the probability that the difference between groups' means would be at least as large as the other groups, given repeated sampling of the same population. If significance is found, post-hoc tests (e.g. Tukey's least significant difference) are conducted to determine which groups significantly differ.

# PRISM Research

## *Executive and Group Interview Script*

Date (Time): \_\_\_\_\_

Name of Interviewer/Session Moderator: \_\_\_\_\_

Type of Interview:

- P-12 Teacher(s)
- School Administrator(s)
- Guidance Counselor(s)
- Higher Education Official(s)
- Community Member(s)/Leader(s)

*Note: We won't have time for all of the following in a 1-hour interview or group session but these are some of the other areas we imagine wanting to probe into. We will have to prioritize.*

### **General Introduction**

- Introduction of interviewer (or session moderator) and Maguire Associates.
- Summarize purpose and importance of the research.
- Why feedback is being solicited from this person (or group of persons).
- No right or wrong answers/All feedback and thoughts will be appreciated.
- Confidentiality promise.
- Address any initial questions.

### **Background Information**

- What is your title? Please describe your job responsibilities.
- **IF P-12 TEACHER:**
  - What subject do you teach? What grade(s) do you teach?
- **IF EMPLOYED IN FIELD OF EDUCATION:**
  - Is your current employer a high school or college/university? Is it public or private?
  - How long have you worked in the field of education? What (if any) other types of positions have you had in the field?
- **IF COMMUNITY MEMBER/LEADER:**
  - Describe your organization. Size? Location? Mission?
  - How might someone in your position influence the math or science that students learn in Georgia public schools?
- Did you personally attend a secondary school in Georgia? Was it public or private?

- What formal background do you have in math or science? What about informal interests?
- Do you have a child who is enrolled in a Georgia public school?

### **Educational Overview**

- What role does a knowledge of math and science play in preparing Georgia's public school students for their futures? Is this changing at all? If so how?
- How important is it to connect children's interests outside the classroom with what they study in school? When do you think children begin to connect "what they want to do when they grow up" with what they study in school? What role do career aspirations play in students' interest and achievement in math and science?
- Let's talk about the role of parents in students' decision making. What are the educational priorities parents have for their sons and daughters? If you yourself have children, what are your educational priorities for your children? (Answers do not specifically need to address priorities in the areas of math and science, but in general.) How involved are parents in directing the educational choices their children make? What kinds of things do parents do that really matter?

### **Students' Interest in Math and Science**

Now, I want to ask you a number of questions regarding students' interest in science and mathematics.

**HIGHER EDUCATION OFFICIALS AND COMMUNITY MEMBERS/LEADERS:** While you may not work directly with students, your opinions and impressions here will be helpful to us.

- **IF P-12 TEACHERS, SCHOOL ADMINISTRATORS, GUIDANCE COUNSELORS:**
  - How interested are your students in pursuing science and mathematics curricula compared to other areas of study?
  - What are the areas of inquiry that seem to fascinate (your) students?
  - What options do students have in the Georgia school system in terms of mathematics and sciences – younger students, older students?
  - How do students go about deciding whether to pursue advanced or regular math and science curricula?
- Why are some students more interested in studying math and science? What do students like about it? How would you describe the type(s) of students who is/are most interested in science and math?
- Can you characterize the type(s) of students who is/are least interested in science and math? What don't they like about it?

### **Enablers and Barriers**

Now let's take a closer look at some of the things you see that encourage or discourage students from taking an interest in these areas.

**HIGHER EDUCATION OFFICIALS AND COMMUNITY MEMBERS/LEADERS:** While you may not work directly with students, your opinions and impressions here will be helpful to us.

- What do you see as the most important factors in encouraging students to take an interest in science and mathematics?
- What are the barriers to student interest in math and science?
  - Social barriers?
  - Socioeconomic barriers?
  - Expectations: gender expectations, parental expectations, etc.?
  - Family environment?
  - Other barriers?
- Let's talk about some of the beliefs regarding math and science that may discourage some students from pursuing studies in these areas. [Use this one as a probe only if they can't produce one on their own: An example might be: "You won't need math or science after you graduate from high school."] What others are you aware of?
- What role does each of the following audiences play in students' interest in science and mathematics? Are they encouraging students to pursue study in math and science? Why or why not?
  - Student him/herself
  - Parents
  - Teachers
  - Guidance counselors
  - School administrators
  - Other students
  - Role models in the community or on television
- **IF P-12 TEACHERS, SCHOOL ADMINISTRATORS, GUIDANCE COUNSELORS:**
  - What types of advice do students typically seek from you? Academic counseling? College counseling? Career counseling?
  - What types of questions do they ask?

### **Students' Achievement in Math and Science**

- Do you think current methods of math and science instruction in the Georgia public schools are "working" to motivate additional study in these areas? Why or why not? [If higher ed or community members/leaders: What are organizations like yours currently doing to encourage P-12 students to engage in math and science?]
- Are students exiting the public school system in Georgia with a fundamental knowledge of science and mathematics? Are they prepared for additional study in those areas? Are the state's needs for an educated work force being met in these areas? What do you see currently being done to match curricular goals to workforce needs? If you see shortfalls overall or within your area of expertise, discuss your concerns.

- Are there regional differences within Georgia in the expectations of students?
- Are there different expectations for students who graduate from the Georgia public school systems than for those who graduate from a local private school? What about from an out-of-state public school?
- How do you think students could be better prepared in the areas of math and science? If you had to make changes tomorrow, what are some of the first things you would do? What would you work to change over the longer term?
- **IF HIGHER EDUCATION OFFICIALS, COMMUNITY MEMBERS/LEADERS:**
  - How might organizations like yours collaborate with the Georgia public schools to foster a richer experience in math or science and greater interest among P-12 students?
- Do you think students interested in majoring in the sciences or math see the same kinds of opportunities within the Georgia university campuses that are available to them in other places at the college level? Why would a math or science major go to college in Georgia versus going elsewhere?

### Message Development

The goal of this research is to inform the message development for a marketing campaign that will raise aspirations of GA students in the areas of mathematics and science. I am interested in your thoughts regarding how students might be encouraged to pursue study in math and science.

- How can more students be encouraged to pursue study in math in science? What about those who do not intend to go on to college?
- How can math and science be made more fun? Inside school? Outside school?
- How would you convey the benefits of taking harder coursework in math and science to students? To parents?
- How can students be convinced they can be successful studying math and science?
- How can math and science be made more relevant – in terms of their career and the demands of daily life? How might connections be made between their science and math studies and the topics that interest them outside the classroom? How might connections be made between students' aspirations and their pursuit of science and math in the classroom?
- How can more students be encouraged to look to Georgia's state university system for math and science at the college level?

### Conclusion

- Do you (or anyone in the group) have any final questions or comments?
- Thank you for your participation.

# PRISM Research

## *Focus Group Script for Younger Children*

### **Introduction (5 minutes)**

- Introduce moderator, Maguire, and PRISM.
- Anonymity/confidentiality.
- Interested in all kinds of different kids and what they think.
- No right or wrong answers.
- This is their chance to say whatever they really think to people who decide what kids like them should learn in school.
- Go around the circle, give first name and grade.

### **Academic Overview (5 minutes)**

- What are you learning about in school right now? What kinds of things have you learned so far this year that you didn't know before?
- What's your favorite thing to do in school? (Probe for academics, not recess/lunch/gym.). What makes it your favorite? Any others that you like? What do you like about them?
- What is your least favorite thing that you do in school? What makes it your least favorite? Anything else you really don't like? What is it about it that you don't like so much?

### **Interest and Participation in Mathematics (20 minutes)**

- Does your teacher ever do math with you? [If children say no or don't know, probe about addition, subtraction, and other typical math activities or refer back to any named above.] How often? What kinds of things are you learning about in math right now?
- How much do you like doing math in school compared to your other subjects? What do you like about math? What is the most fun thing you've ever done in math? What was that like?
- What don't you like about math? What's the least fun thing you've ever done in math? What was that like?
- Would you say that math is really hard for you compared to the other things you do in school or pretty easy? What makes you say that? Would you say that it is boring compared to the other things you do or pretty interesting? (For those who find it hard or boring: What helps you most? [Probe for types of parental/teacher/peer intervention, study habits]. Is there anything that could make it more fun for you even when it's hard?)
- Is there anything you do outside of school that uses math? (Probe for awareness of telling time, measuring, cooking, card games, etc.) Do you ever do things that use math just for fun? If so, what kinds of things?

- Have you ever gotten special help or encouragement from someone to do more with math? If yes, describe what happened.
- Has anyone ever held you back or made you feel bad about wanting to do math? If yes, what happened?

### **Interest and Participation in Science (20 minutes)**

Note: the youngest children – below third or fourth grade -- may engage in science inside and outside the classroom without recognizing it as such. The moderator may have to spend more time probing into activities and may or may not be able to use the word “science” as an overall label. This in itself will be important to learn. Some children may engage in little or no classroom science, in which case this part of the discussion may be brief, also an important learning.

- Does your teacher ever do science with you? [If children say no or don’t know, probe about some typical science activities {e.g. learning about animals, plants, or nature, classroom pets, doing experiments to find out what will happen, etc.} or refer back to any named above.] How often? What kinds of things are you learning about in science right now?
- How much do you like doing science (or “things like these”) in school compared to your other subjects? What do you like about science? What is the most fun thing you’ve ever done in science? What was that like?
- What don’t you like about science? What’s the least fun thing you’ve ever done in science? What was that like?
- Would you say that science is really hard for you compared to the other things you do in school or pretty easy? What makes you say that? Would you say that it is boring compared to the other things you do or pretty interesting? (For those who find it hard or boring: What helps you most? [Probe for types of parental/teacher/peer intervention, study habits]. Is there anything that could make it more fun for you even when it’s hard?)
- Is there anything you do outside of school that uses science? (Probe for interests in pets, plants, animals, stars, the outdoors, etc.) Do you ever do things that use science just for fun? If so, what kinds of things?
- Have you ever gotten special help or encouragement from someone to do more with science? If yes, describe what happened.
- Has anyone ever held you back or made you feel bad about wanting to do science? If yes, what happened?

### **Educational Aspirations (8 minutes)**

- Do your parents ever talk to you about going to school? About going to college? Do they ever talk to you about math or science? If so what do they say?
- What do you think you might want to do when you grow up? Do you think you’ll need to know math or science to do that or do you think they are not so important for that?

### **Conclusion (2 minutes)**

- Thank you for your participation.

# PRISM Research

## *Focus Group Script for Older Children*

*Note: We will not have time for all of the following in a 1-hour (or 1 class period) session, but these are some of the areas we will want to probe. We will have to prioritize.*

Prior to beginning the discussion, children will be asked to write down their most and least favorite subjects, characteristics of their most and least favorite math teachers, characteristics of their most and least favorite science teachers, and their favorite things to do and places to go outside of school. (These will help anchor the conversation and minimize any “editing” of answers to be more like other peers.)

### **Introduction (5 minutes)**

- Introduce moderator, Maguire, and PRISM.
- Anonymity/confidentiality.
- Interested in all kinds of different kids and what they think.
- No right or wrong answers.
- This is their chance to say whatever they really think to people who decide what kids like them should learn in school.
- Go around the circle, give first name and grade.

### **Academic Overview (5 minutes)**

- What’s your favorite subject in school? What makes it your favorite? Any others that you like? What do you like about them?
- What is your least favorite subject in school? What makes it your least favorite? Any others you really don’t like? What is it about them that you don’t like so much?
- Can something in school be really hard and still be fun? Why or why not? Can you give me some examples of things you’ve had to work really hard at that you had a great time doing? (Preferably in school, but probe for examples outside of school if academic examples are not forthcoming.)

### **Interest and Participation in Mathematics (15 minutes)**

- How much do you like doing math in school compared to your other subjects? What do you like about math? What is the most fun thing you’ve ever done in math class? What was that like? Think about the very best teacher you’ve ever had for this subject (no names). What happened in that class that was different? Have you ever done a special project or gone on a class field trip that taught you something new or interesting about math?

- What don't you like about this subject? What's the least fun thing you've ever done in this class? What was that like? Think about the very worst teacher you've ever had for math (no names). What happened in that class that was different?
- Would you say that math is really hard for you compared to your other subjects or pretty easy? What makes you say that? Would you say that it is boring compared to your other subjects or pretty interesting? (For those who find it hard or boring: What helps you most? [Probe for types of parental/teacher/peer intervention, study habits.]
- If I told you that schools are thinking about ways to teach more advanced math at your level but also make it more fun for kids just like you, what would you say? Do you have any suggestions that could help them do that?
- It turns out that kids in most other states are already taking more advanced math classes than kids in Georgia. What do you think about that?
- Have you ever gotten special help or encouragement from someone to do more with math? If yes, describe what happened.
- Have you ever felt like you were held back from going as fast as you wanted or discouraged from looking into something that interested you in math? If yes, what happened?

#### **Interest and Participation in Science (15 minutes)**

- How much do you like doing science in school compared to your other subjects? What do you like about science? What is the most fun thing you've ever done in science class? What was that like? Think about the very best teacher you've ever had for this subject (no names). What happened in that class that was different? Have you ever done a special project or gone on a class field trip that taught you something new or interesting about science?
- What don't you like about this subject? What's the least fun thing you've ever done in this class? What was that like? Think about the very worst teacher you've ever had for science (no names). What happened in that class that was different?
- Would you say that science is really hard for you compared to your other subjects or pretty easy? What makes you say that? Would you say that it is boring compared to your other subjects or pretty interesting? (For those who find it hard or boring: What helps you most? [Probe for types of parental/teacher/peer intervention, study habits.]
- If I told you that schools are thinking about ways to teach more advanced science at your level but also make it more fun for kids just like you, what would you say? Do you have any suggestions that could help them do that?
- It turns out that kids in most other states are already taking more advanced science classes than kids in Georgia. What do you think about that?
- Have you ever gotten special help or encouragement from someone to do more with science? If yes, describe what happened.
- Have you ever felt like you were held back from going as fast as you wanted or discouraged from looking into something that interested you in science? If yes, what happened?

#### **Math/Science Outside the Classroom (10 minutes)**

- What kinds of things do you do for fun when you're not at school? (Probe for types of television programs and movies, use of internet, video games, and reading habits.)

- What kinds of places do you go for fun when you're not at school? Anywhere else that you've been with your family or friends in the past year? (Probe for library, museums, and other educational and nature destinations.)
- Do you ever learn about math or science outside of school? (Probe to connect these with earlier answers.)
- Do you ever use math or science outside of school? (Probe to connect these with earlier answers. Also awareness regarding measuring, cooking, money, card games, nature, sports, etc.) Do you ever do anything that uses math or science just for fun? If yes, describe it.
- If you could connect the math or science you're learning right now with some of the things you like to do (give specific examples, like the chemistry of baking or the physics of baseball), would it make a difference in how you feel about the subject or would you still feel the same? Explain your answer.
- What about your parents? What do they do? Do they ever use math or science for what they do?

### **Educational Aspirations (7 minutes)**

- Do your parents ever talk to you about going to school? About going to college? Do they ever talk to you about math or science? If so what do they say?
- What do you think you might want to do when you grow up?
- Do you think you'll need to know math or science to do that or do you think they are not so important for that? If yes, what kinds of math/science do you think you might need to study to be ready for that?
- What's the last grade that your parents finished in school? How far do you think you would have to go in school to do what you want to do? How far do you think you will go? (Probe if there is a mismatch.)

### **Conclusion (3 minutes)**

- Does anyone have any final questions or comments?
- Thank you for your participation.

# Appendix II

## Annotated Student Survey

# PRISM STUDENT SURVEY ANNOTATED INSTRUMENT

(N = 643)

Thank you for agreeing to participate in this survey. Remember all responses are confidential, and there are no right or wrong answers.

## ON-LINE SURVEY:

Please record your e-mail address below. If for any reason you have to stop before you have completed the survey, we will use it to e-mail a web site link that you can use to pick up the survey where you left off.

If you do not have an e-mail address or would prefer to remain anonymous, you may continue without recording an e-mail address.

Email Address: \_\_\_\_\_

## CAREER AND EDUCATIONAL GOALS

Q-1. What high school class are you in? (n = 643)

- 28.0% Freshman
- 13.5% Sophomore
- 31.7% Junior
- 26.6% Senior
- 0.2% Not reported

Q-2a. What is the highest level of education you hope to complete? (n = 643)

- 3.4% Some high school
- 4.7% High school diploma
- 11.5% Business/Trade/Other 2-year school degree
- 19.4% Bachelor's degree
- 22.1% Master's degree
- 14.0% Doctorate (Ph.D.)
- 14.9% Professional degree (law, medicine)
- 10.0% Do not know

Q-2b. What makes this your educational goal? In particular please explain why you do or do not expect to go to college. (n = 643)

**Top Mentions:**

- 30.3%** Need college/school for desired career path
- 15.1%** Need college to succeed/Do something with my life/Better life
- 9.5%** Not reported
- 8.4%** Want a good job/career
- 8.2%** Want a good education/To learn
- 5.1%** Make more money

Q-3. If you are planning to go to college, which type of college are you planning to go to? (n = 643)

- 51.2%** Public college/university located in Georgia
- 4.7%** Private college/university located in Georgia
- 17.3%** Public college/university located outside Georgia
- 2.6%** Private college/university located outside Georgia
- 13.4%** Undecided/Do not know/Does not matter
- 10.6%** Does not apply to me /Not planning to go to college
- 0.3%** Not reported

Q-4a. Are you familiar with the HOPE (Helping Outstanding Pupils Educationally) scholarship? (n = 643)

- 75.0%** Yes, I am familiar with it
- 20.7%** Yes, I have heard of it, but do not know anything else about it
- 4.0%** No, I have not heard of it
- 0.3%** Not reported

Q-4b. Are you trying to qualify for the HOPE scholarship? (n = 643)

- 63.1%** Yes **(RESPONDENTS ANSWERQ-4c)**
- 7.8%** No
- 19.6%** Not sure
- 9.3%** Not applicable/Not planning to go to college
- 0.2%** Not reported

Q-4c. If yes, to qualify for the HOPE scholarship, should you: (n = 406)

- 61.1%** Take as many advanced courses as possible to show I can do challenging work
- 26.1%** Take few if any advanced courses to get the highest grade point average possible
- 11.6%** Do not know
- 1.2%** Not reported

- Q-5. If you are planning to go to college, what major areas of study are you considering? Please record up to three areas. (n = 643)

**Top Mentions:**

- 11.5% Nursing**
- 10.0% Does not apply to me/I am not planning to go to college.**
- 9.8% Medicine/Pre-Medical/Biomedical**
- 9.6% Education/Teaching**
- 9.5% Law/Pre-law**
- 8.7% Business Administration/Management**

- Q-6. What would you most like to do for a living when you leave school? (n = 643)  
If your response is not on the list, please record it in the “other” space provided.

**Top Mentions:**

- 8.9% Doctor**
- 6.4% Do not know/Not reported**
- 6.2% Nurse**
- 5.3% Teacher/Professor**
- 5.0% Military**
- 4.5% Business Owner**

**SOURCES OF INFLUENCE**

- Q-7. Please rate how influential each of the following people is on your interest and achievement in school.

Scale: 1 = Not at All Influential to 5 = Extremely Influential

	n	mean	std. dev.
Your parent(s) or guardian(s)	<b>641</b>	<b>4.12</b>	<b>1.08</b>
Your brother(s) or sister(s) (if none, leave blank)	<b>589</b>	<b>2.99</b>	<b>1.31</b>
Other relative(s) or family member(s)	<b>632</b>	<b>3.34</b>	<b>1.18</b>
Guidance counselor(s) at your school	<b>634</b>	<b>2.76</b>	<b>1.32</b>
Your teacher(s)	<b>638</b>	<b>3.49</b>	<b>1.18</b>
Administrator(s) at your school such as the principal	<b>634</b>	<b>2.78</b>	<b>1.38</b>
Your friends	<b>636</b>	<b>3.39</b>	<b>1.10</b>
Your minister/priest	<b>612</b>	<b>2.84</b>	<b>1.51</b>
Your coach	<b>606</b>	<b>2.73</b>	<b>1.48</b>
People on TV or other celebrities	<b>628</b>	<b>2.15</b>	<b>1.25</b>

- Q-8. Please describe any other organizations or people which have made a difference in your interest and achievement in school. (n = 643)

**Top Mentions:**

- 51.2% Not reported**
- 9.5% Family member**
- 6.7% Teacher/Coach**
- 4.0% Friend**
- 3.6% ROTC/JROTC/Military**
- 3.3% Church/Christian group**

- Q-9. Thinking about the process you go through when you are trying to decide which classes to take, please rate your level of agreement with each of the following statements.

**Scale: 1 = Strongly Disagree to 5 = Strongly Agree**

	n	mean	std. dev.
I know what I need to take and do not ask for any help picking classes.	638	2.91	1.16
I take the classes I need to get into college.	639	4.09	0.96
I take the same classes my friends are taking.	638	2.50	1.04
I talk with my guidance counselor regarding which classes to take.	636	3.38	1.19
I take the easiest classes I can so I can pass and move on to my next year of school.	638	2.09	1.11
I take the most advanced classes available to me.	637	3.29	1.15
I talk with my parents regarding which classes to take.	637	3.63	1.15
I take the easiest courses I can in order to get good grades and keep up my grade point average.	637	2.24	1.09

- Q-10. How often do your parent(s) or guardian(s) do each of the following with you?

	n	Never	Not Within the Last Year	Less Than Once a Month	Once or Twice a Month	Once or Twice a Week	Daily	Not reported
Help you do your homework	643	24.7%	12.0%	16.2%	15.9%	17.4%	12.8%	1.1%
Emphasize the importance of doing well in school in order to be successful	643	2.6%	1.9%	6.2%	16.8%	21.5%	50.4%	0.6%
Talk with you about life outside of school and how it relates to what you are studying in school	643	8.7%	5.0%	12.6%	23.2%	19.6%	30.0%	0.9%
Talk with you about your college options	643	11.0%	6.2%	15.4%	26.7%	20.1%	20.1%	0.5%
Talk with you about what you would like to do after you finish high school	643	5.0%	4.8%	13.5%	27.8%	23.2%	24.6%	1.1%
Talk with you about what they do and the training they needed in school to do their job(s) (if not applicable, leave blank)	643	15.1%	9.6%	16.5%	19.4%	14.6%	13.1%	11.7%

**SCHOOL INTERESTS**

Q-11. How interested are you in each of the following at school?

Scale: 1 = Not at All Interested to 5 = Extremely Interested

	n	mean	std. dev.
Lectures	<b>638</b>	<b>2.14</b>	<b>1.11</b>
Worksheets	<b>638</b>	<b>2.49</b>	<b>1.11</b>
Hands-on projects	<b>640</b>	<b>3.95</b>	<b>1.13</b>
Experiments/Demonstrations	<b>637</b>	<b>3.95</b>	<b>1.09</b>
Instructional videos	<b>634</b>	<b>2.91</b>	<b>1.23</b>
Field trips	<b>637</b>	<b>4.30</b>	<b>0.98</b>
Group projects	<b>639</b>	<b>3.71</b>	<b>1.17</b>
Independent projects	<b>639</b>	<b>3.12</b>	<b>1.28</b>
Computer-based learning	<b>639</b>	<b>3.36</b>	<b>1.22</b>

Q-12. How interested are you in each of the following school subjects?

Scale: 1 = Not at All Interested to 5 = Extremely Interested

	n	mean	std. dev.
English/Language Arts	<b>639</b>	<b>3.07</b>	<b>1.27</b>
Mathematics (e.g., Algebra, Trigonometry, Geometry, Calculus, etc.)	<b>639</b>	<b>2.91</b>	<b>1.40</b>
Physical education	<b>639</b>	<b>3.44</b>	<b>1.35</b>
Social studies	<b>639</b>	<b>2.99</b>	<b>1.24</b>
Science (e.g., Physics, Chemistry, Biology, etc.)	<b>638</b>	<b>3.14</b>	<b>1.29</b>
Art	<b>641</b>	<b>3.12</b>	<b>1.43</b>
Computer Science	<b>638</b>	<b>2.89</b>	<b>1.33</b>
Foreign Language	<b>640</b>	<b>2.95</b>	<b>1.29</b>
Literature/Composition	<b>637</b>	<b>2.92</b>	<b>1.30</b>
Music/Band	<b>638</b>	<b>2.68</b>	<b>1.54</b>

***Questions Regarding Mathematics***

Q-13a. Are you currently taking any mathematics courses? (**n = 643**)

- 72.3%** Yes
- 26.9%** No
- 0.8%** Not reported

Q-13b. Please indicate which math courses you have taken or are taking. Please select all that apply.  
(n = 643)

**68.9%** Algebra 1  
**59.7%** Pre-Algebra  
**45.3%** Geometry  
**37.0%** Algebra 2/Trigonometry  
**9.0%** Algebra 3  
**4.0%** Pre-Calculus  
**3.9%** Calculus  
**3.6%** None reported  
**2.5%** Problem Solving  
**2.3%** Advanced Algebra  
**1.4%** Applied Algebra  
**0.8%** Probability/Statistics  
**0.6%** Concepts of Algebra  
**0.5%** Math Concepts  
**0.3%** Money Management  
**0.2%** SAT Preparation  
**0.2%** Technical Preparation Course  
**0.2%** Analysis  
**0.2%** Economics

Q-13c. When you think of “mathematics,” what is the first word or phrase that comes to mind? (n = 643)

**Top Mentions:**

**14.2%** Numbers  
**12.3%** Hard/Difficult  
**6.2%** Math  
**5.8%** Not reported  
**5.3%** Adding/Addition  
**4.2%** Equations

Q-13d. Please rate your level of ability in the area of mathematics. (n = 638, mean = 3.39, std. dev. = 0.90)

**2.7%** 1 = Well below average  
**10.0%** 2 = Somewhat below average  
**43.4%** 3 = Average  
**33.1%** 4 = Somewhat above average  
**10.8%** 5 = Well above average

Q-13e. Please rate each of the following descriptions for your level of agreement.

Scale: 1 = Strongly Disagree to 5 = Strongly Agree

	n	mean	std. dev.
I do not see any connection between the mathematics I am learning in school and what goes on outside of school.	629	2.56	1.25
I will need a good knowledge of mathematics in order to do well in my chosen career or trade.	628	3.77	1.11
You have to know at least some mathematics to do most jobs.	626	4.24	0.80
Math is among my favorite subjects in school.	621	2.84	1.45
I would like math more if it were made more interesting.	625	3.61	1.13
Math is too hard for me.	626	2.27	1.13
I am doing well in math.	600	3.64	1.08
The inability of other students to keep up is holding me back in mathematics.	611	2.41	1.08
At my school, if you do well in mathematics, you are considered a “nerd.”	624	2.07	1.10
At my school, you can do well in mathematics and still be considered “cool.”	621	3.88	0.99
I know where to go when I need help in math.	625	4.02	0.94
My parents find it difficult to help me when I have questions about mathematics.	615	3.30	1.30
I need help in math, but my teacher does not have the time to help me.	607	2.02	1.06
My mathematics teacher encourages me to do better.	606	3.74	1.10
My parent/guardian(s) encourage me to do better in math.	621	3.81	1.11
My teacher(s) doesn’t explain math in a way that helps me to understand it.	617	2.56	1.30
Some students just can’t do math.	624	3.29	1.18
Math is more important for boys than it is for girls.	621	1.81	0.97
Math is not very important for those who don’t plan to go to college.	624	1.96	1.07
I do better now in mathematics than I did when I was younger.	632	2.98	1.30
I liked math more when I was younger.	623	3.30	1.35

### *Questions Regarding Science*

Q-14a. Are you currently taking any science courses? (n = 643)

- 58.5% Yes
- 39.8% No
- 1.7% Not reported

Q-14b. Please indicate which science courses you have taken or are taking. Please select all that apply.  
(n = 643)

62.5% Biology  
 62.5% Physical Science  
 24.6% Chemistry  
 11.0% None reported  
 8.9% Human Anatomy  
 5.3% Environmental Science  
 5.0% Physics  
 1.4% Science Interactions  
 1.2% Earth Science  
 0.9% Health Science  
 0.6% Other (not specified)  
 0.6% Life Science  
 0.2% Animal Science  
 0.2% Oceanography

Q-14c. When you think of “science,” what is the first word or phrase that comes to mind? (n = 643)

**Top Mentions:**

12.4% Experiments  
 9.5% Not reported  
 6.5% Interesting  
 4.8% Fun  
 4.2% Chemicals  
 3.6% Boring  
 3.6% Difficult/Hard/Confusing

Q-14d. Please rate your level of ability in the area of science. (n = 618, mean = 3.52, std. dev. = 0.79)

0.8% 1 = Well below average  
 4.7% 2 = Somewhat below average  
 47.2% 3 = Average  
 35.9% 4 = Somewhat above average  
 11.3% 5 = Well above average

Q-14e. Please rate each of the following descriptions for your level of agreement.

Scale: 1 = Strongly Disagree to 5 = Strongly Agree

	n	mean	std. dev.
I do not see any connection between the science I am learning in school and what goes on outside of school.	598	2.47	1.13
I will need a good knowledge of science in order to do well in my chosen career or trade.	604	3.53	1.20
You have to know at least some science to do most jobs.	603	3.37	1.05
Science is among my favorite subjects in school.	600	3.16	1.27
I would like science more if it were made more interesting.	593	3.48	1.16
Science is too hard for me.	600	2.15	1.08
I am doing well in science.	555	3.85	0.89
The inability of other students to keep up is holding me back in science.	571	2.32	1.04
At my school, if you do well in science, you are considered a “nerd.”	597	2.17	1.08
At my school, you can do well in science and still be considered “cool.”	594	3.78	1.03
I know where to go when I need help in science.	587	3.90	0.97
My parents find it difficult to help me when I have questions about science.	593	2.90	1.21
I need help in science, but my teacher does not have the time to help me.	575	2.06	0.99
My science teacher encourages me to do better.	571	3.69	1.07
My parent/guardian(s) encourage me to do better in science.	586	3.59	1.17
My teacher(s) doesn't explain science in a way that helps me to understand it.	577	2.31	1.14
Some students just can't do science.	590	2.93	1.17
Science is more important for boys than it is for girls.	596	1.94	1.02
Science just isn't very important for those who don't plan to go to college.	602	2.38	1.11
I do better now in science than I did when I was younger.	593	3.09	1.17
I liked science more when I was younger.	597	3.03	1.21

**INTERESTS OUTSIDE OF SCHOOL**

Now we want to focus on your personal interests and activities outside of school.

Q-15. What do you like to do with your free time when you are not in school? Please name two things. (n = 643)

**Top Mentions:**

- 31.7%** Athletics/Sports/Work out
- 28.0%** Be with friends
- 11.0%** Listen to music/Play music
- 8.4%** Read
- 8.1%** Go shopping

Q-16. How do you prefer to learn about new things? Please select all that apply. (n = 643)

- 82.7%** Hands-on approach
- 41.2%** Computer/Video games
- 40.1%** Video
- 39.2%** Television
- 35.5%** Written formats (books, magazines, etc.)
- 19.1%** Radio/Audiotape
- 7.8%** Other
  - Teachers/People who know the subject (n = 11)*
  - Group Projects (n = 9)*
  - Demonstrations/Experiments (n = 6)*
  - Internet (n = 3)*
  - Taking notes (n = 3)*
  - Lectures/Classroom style (n = 3)*
  - Visual aids (n = 3)*
  - Projects (n = 2)*
  - Field trips (n = 2)*
  - Parents (n = 1)*
  - Telephone (n = 1)*
  - Classroom games (n = 1)*
  - Straight to the point (n = 1)*
  - Sport (n = 1)*
  - Study (n = 1)*
  - Friends (n = 1)*
  - Life Experience (n = 1)*
- 1.4%** Not reported

Q-17. What are your favorite TV shows? Please name two favorites. (n = 643)

**Top Mentions:**

- 8.6%** The O.C.
- 8.1%** The Simpsons
- 7.6%** Not reported
- 6.8%** That 70's Show
- 6.5%** CSI
- 5.6%** Real World/Road Rules

Q-18. Who are your top two role models? In other words, who do you look up to or want to be like? (n = 643)

**Top Mentions:**

- 27.4%** Mother
- 18.5%** Father
- 14.0%** Specific name mentioned (unidentified)
- 13.5%** Not reported
- 10.7%** Actor/Actress
- 10.3%** Famous musician

**DEMOGRAPHICS**

Finally, please answer the following questions, so that we can group your responses with those of others participating in this survey. Please be assured that your responses are completely confidential.

D-1. What is your gender? (n = 643)

- 43.9%** Male
- 56.0%** Female
- 0.2%** Not reported

D-2. Where do you go to school? (n = 643)

- 50.1%** Jackson County Comprehensive High School (Northeast)
- 18.8%** Southeast Bulloch High School (East Central)
- 21.0%** Southside High School (Atlanta)
- 10.0%** Windsor Forest High School (Southeast)
- 0.2%** Crim High School

D-3. What types of grades do you typically get in school? (n = 643)

- 13.5%** Mostly A's
- 47.4%** A's and B's
- 31.6%** B's and C's
- 4.7%** C's and D's
- 0.8%** D's and F's
- 2.0%** Prefer not to report

D-4. If you are or have taken any Advanced Placement (AP), honors or baccalaureate classes, please indicate which one(s) below. (n = 643)

- 17.7%** Mathematics-related (Calculus, Statistics, etc.)
- 31.9%** Science-related (Physics, Chemistry, Biology, etc.)
- 26.4%** English
- 18.2%** History
- 15.7%** Social Sciences
- 53.0%** Not taking any Advanced Placement, honors or baccalaureate classes

D-5. Please indicate the highest level of education your father or other male guardian has completed. (n = 643)

- 17.4% Less than high school
- 31.6% High school diploma
- 8.2% Business/Trade/Other 2-year program
- 14.3% Some college
- 7.8% Bachelor's degree
- 0.5% Some graduate school
- 4.8% Master's Degree
- 2.0% Doctorate (Ph.D.)
- 1.2% Professional degree (law, medicine)
- 1.4% Not applicable/Do not have a father or male guardian (**Respondents skipped to D-7**)
- 10.1% Do not know
- 0.6% Not reported

D-6. What does your father (or male guardian) do for a living? (n = 634)

**Top Mentions:**

- 18.3% **Not reported/Do not know**
- 7.3% **Carpenter**
- 5.7% **Truck driver**
- 5.5% **Mechanic/Automotive**
- 4.9% **Engineer**
- 4.4% **Business Owner**

D-7. Please indicate the highest level of education your mother or other female guardian has completed. (n = 643)

- 12.6% Less than high school
- 33.0% High school diploma
- 10.1% Business/Trade/Other 2-year program
- 17.9% Some college
- 8.4% Bachelor's degree
- 1.4% Some graduate school
- 5.3% Master's degree
- 0.9% Doctorate (Ph.D.)
- 1.1% Professional degree (law, medicine)
- 0.6% Not applicable/Do not have a mother or female guardian (**Respondents skipped to D-9**)
- 6.8% Do not know
- 1.9% Not reported

D-8. What does your mother or female guardian do for a living? (n = 639)

**Top Mentions:**

- 13.3%** Not reported/Do not know
- 10.0%** Homemaker/Stay at home
- 7.8%** Nurse
- 7.8%** Teacher/Professor
- 4.7%** Restaurant/Food Services
- 4.1%** Secretary

D-9. How would you describe your ethnic background? (n = 643)

- 2.0%** Asian
- 0.0%** Native Hawaiian/Pacific Islander
- 25.3%** Black/African American/Afro-Caribbean
- 2.0%** Hispanic
- 60.0%** White/Caucasian
- 1.1%** American Indian/Alaskan Native
- 3.9%** Multi-racial
- 0.0%** Other
- 5.6%** Prefer not to report

The information requested below will be used only for the prize drawing. Your name will not be connected in any way with your responses to the survey questions. (If you would rather submit your name and contact information separate from your data, please email your name, address, phone number and email address to Shane Karcz at [skarcz@maguireassoc.com](mailto:skarcz@maguireassoc.com) with "Enter Me Into the Prize Drawing" noted in the subject line.)

Please record your name, address, and phone number:

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

Email Address: \_\_\_\_\_

Thank you for participating in this research!

# Appendix III

## Annotated Parent Survey

# PRISM PARENT SURVEY ANNOTATED INSTRUMENT

(N = 451)

Please confirm (ON-LINE: by checking the box below) that you have read the invitation letter that your child brought home from school and that you would like to be in this study.

- I have read the invitation letter and want to participate in this survey.**

## ON-LINE SURVEY:

Please record your e-mail address below. If for any reason you have to stop before you have finished the survey, we will use it to e-mail a web site link that you can use to pick up the survey where you left off.

If you do not have an e-mail address or would prefer to remain anonymous, you may continue without recording an e-mail address.

Email Address: \_\_\_\_\_

Thank you for participating in this survey. This survey will tell us about your goals for the education of your child/children. Remember all responses are confidential, and there are no right or wrong answers.

## INTRODUCTION

Q-1. How many children do you have? (n = 451)

16.2%	1
45.5%	2
25.9%	3
9.1%	4
2.2%	5
0.4%	6
0.2%	7
0.2%	10
0.2%	12

**(IF MORE THAN ONE CHILD MENTIONED IN Q-1)** We would like you to answer all of the questions in this survey with one child in mind. Please answer the questions in this survey keeping in mind your son or daughter who brought home the invitation letter. (If more than one of your children brought home an invitation to participate in this research, please answer the questions with the older/oldest child who brought home an invitation in mind.)

Q-2. Is this child male or female? (n = 451)

48.8% Male  
51.2% Female

Q-3. What year is he/she in school? (n = 451)

0.4% Preschool  
3.1% Kindergarten  
5.5% 1<sup>st</sup> grade  
3.8% 2<sup>nd</sup> grade  
5.1% 3<sup>rd</sup> grade  
6.2% 4<sup>th</sup> grade  
5.3% 5<sup>th</sup> grade  
15.7% 6<sup>th</sup> grade  
10.6% 7<sup>th</sup> grade  
9.1% 8<sup>th</sup> grade  
8.2% 9<sup>th</sup> grade  
10.0% 10<sup>th</sup> grade  
9.1% 11<sup>th</sup> grade  
7.5% 12<sup>th</sup> grade  
0.2% Not reported

Q-4. What school does your child attend? (n = 451)

10.2% Camden Middle School (Southeast)  
10.6% Greer Elementary School (Southeast)  
31.0% Jackson County Comprehensive High School (Northeast)  
2.0% Langston Chapel Middle School (East Central)  
2.0% MLKing, Jr. Middle School (Atlanta)  
8.4% Morris Brandon Elementary School (Atlanta)  
6.2% North Jackson Elementary School (Northeast)  
3.8% Screven County Elementary School (East Central)  
2.2% Southeast Bulloch High School (East Central)  
0.2% Southside High School (Atlanta)  
20.4% West Jackson Middle School (Northeast)  
1.3% Windsor Forest High School (Southeast)  
1.6% Other

Q-5. Compared to other children of a similar age, how would you rate the academic ability of your son/daughter?  
(n = 451, mean = 4.01, std. dev. = 0.96)

2.2% 1 = Well below average  
3.5% 2 = Somewhat below average  
21.3% 3 = Average  
36.6% 4 = Somewhat above average  
36.4% 5 = Well above average

Q-6. Compared to other children of a similar age, how would you rate the academic performance of your son/daughter? (n = 451, mean = 3.73, std. dev. = 1.05)

- 4.0% 1 = Well below average
- 7.1% 2 = Somewhat below average
- 26.8% 3 = Average
- 36.1% 4 = Somewhat above average
- 25.9% 5 = Well above average

### **EDUCATIONAL GOALS**

If you have more than one child, please remember to answer the questions in this survey with the child who brought home the survey invitation in mind. If more than one child brought home an invitation, please answer for the older child.

Q-7. Please rate each of the following descriptions for your level of agreement.

**Scale: 1 = Strongly Disagree to 5 = Strongly Agree**

	n	mean	std. dev.
I want my child to pursue the same career path I did.	449	2.45	0.91
I want my child to do better than I did in school.	450	4.49	0.76
I want my child to be able to have a better job than I have.	449	4.42	0.84
Students who attend school in rural areas should be expected to perform as well as students who go to schools in urban areas.	448	4.42	0.82
I use science daily in my personal or work life.	447	3.42	1.08
I use mathematics daily in my personal or work life.	448	4.41	0.73
My child can do well in any subject if he/she has a good teacher.	448	4.28	0.83
I believe my child's teachers have the tools and materials they need to provide an excellent education in the classroom.	449	3.75	0.91
I see a direct link between doing well in school and having better opportunities in life.	450	4.68	0.58
I believe my child's teachers are giving him/her an excellent education.	450	3.94	0.90

Q-8. How important do you think it is that your son/daughter does well in each of the following subject areas?

Scale: 1 = Not at All Important to 5 = Extremely Important

	n	mean	std. dev.
English/Language Arts	450	4.64	0.54
Mathematics (e.g., Algebra, Trigonometry, Geometry, Calculus, etc.)	450	4.58	0.65
Physical Education	447	3.59	1.02
Social Studies	448	4.01	0.83
Science (e.g., Physics, Chemistry, Biology, etc.)	450	4.25	0.84
Art	449	3.13	1.06
Computer Science	449	4.42	0.75
Foreign Language	448	3.58	1.05
Literature/Composition	447	4.36	0.78
Music/Band	447	3.13	1.12

Q-9. How likely is it that your child will go to college? (n = 451, mean = 4.36, std. dev. 0.94)

- 1.3% 1 = Not at all Likely
- 6.7% 2 = Somewhat Likely
- 5.1% 3 = Moderately Likely
- 28.8% 4 = Very Likely
- 58.1% 5 = Extremely Likely

Q-10. What is the highest level of education you hope your child will complete? (n = 451)

- 0.0% Some high school
- 1.8% High school diploma
- 5.5% Business/Trade/Other 2-year degree
- 21.3% Bachelor's degree
- 31.9% Master's degree
- 11.1% Doctorate (Ph.D.)
- 22.8% Professional degree (law, medicine)
- 5.1% Do not know
- 0.4% Not reported

Q-11. What makes this your educational goal for your child? In particular, please explain why you do or do not hope your child goes to college. (n = 451)

**Top Mentions**

- 51.9% Need college to succeed/Want the best for them/Better life
- 18.0% Wants a good job/career for them
- 10.9% Needs college/school for their desired career path
- 9.1% Not reported
- 1.8% Want to go to college (non-specific)
- 1.6% He/she has a learning disability

Q-12. If you are interested in your child going to college, what type of college do you want him/her to go to? (n = 451)

- 49.9% Public college/university located in Georgia
- 6.2% Private college/university located in Georgia
- 3.8% Public college/university located outside Georgia
- 5.1% Private college/university located outside Georgia
- 32.6% Undecided/Do not know/Does not matter
- 2.0% Not applicable/I am not interested in my child going to college.
- 0.4% Not reported

Q-13a. Are you familiar with the HOPE (Helping Outstanding Pupils Educationally) scholarship? (n = 451)

- 76.7% Yes, I am familiar with it
- 20.0% Yes, I have heard of it, but do not know anything else about it
- 3.3% No, I have not heard of it

Q-13b. Do you want you child to try to qualify for the HOPE scholarship? (n = 451)

- 89.6% Yes (RESPONDENTS ANSWER Q-13c)
- 1.1% No
- 7.5% Not sure
- 1.8% Not applicable/My child is not planning to go to college

Q-13c. If yes, to qualify for the HOPE scholarship, should your child: (n = 404)

- 57.9% Take as many advanced courses as possible to show they can do challenging work
- 12.4% Take few if any advanced courses to get the highest grade point average possible
- 29.5% Don't know
- 0.2% Not reported

Q-14a. Please indicate how optimistic you are about being able to afford a college education for your child. (n = 450, mean = 3.01, std. dev. = 1.21)

- 11.3% 1 = Not at all optimistic
- 24.7% 2 = Somewhat optimistic
- 29.1% 3 = Moderately optimistic
- 21.6% 4 = Very optimistic
- 13.3% 5 = Extremely optimistic

Q-14b. If you are interested in your child going to college, please indicate which of the following sources you expect to use to finance your child's college education. Select all that apply. (n = 451)

- 80.9% HOPE scholarship
- 63.0% Your (and your spouse's if applicable) personal savings/resources
- 58.3% Other scholarship/Merit-based aid from the college or university
- 45.9% Loans
- 34.6% Need-based grants and scholarships from the college or university
- 27.3% Other grants (e.g., from church, employer, private foundation, etc.)
- 24.2% Child's personal savings/resources
- 18.4% Athletic scholarship
- 6.0% Other
  - Military (n = 5)*
  - Trust fund/Inheritance (n = 4)*
  - Family members (n = 4)*
  - Retirement funds (n = 3)*
  - Pell Grant/Federal Grants (n = 3)*
  - College saving account (n = 2)*
  - Music scholarship (n = 2)*
  - VA (n = 2)*
  - Company scholarship (n = 1)*
  - EE Bonds (n = 1)*
- 0.4% Not reported

### INFLUENCE & INVOLVEMENT

Q-15. How influential do you think you are (and your spouse/partner is, if applicable) in your child's interest and achievement in school? (n = 450, mean = 4.20, std. dev. = 0.88)

- 0.4% 1 = Not at all Influential
- 4.9% 2 = Somewhat Influential
- 13.1% 3 = Moderately Influential
- 37.1% 4 = Very Influential
- 44.4% 5 = Extremely Influential

Q-16a. Compared to the following people, how much influence do you think you (and your partner/spouse if applicable) have on your child's formal education?

Scale: 1 = I have much less influence to 5 = I have much more influence

	n	mean	std. dev.
Your other children (if none, leave blank)	374	4.21	0.97
Other relative(s) or family member(s)	441	4.21	0.96
Guidance counselor(s) at your child's school	440	4.05	1.00
Teacher(s) at your child's school	443	3.80	1.02
Administrator(s) at your child's school such as the principal	442	3.98	1.03
Your child's friends	440	4.07	1.06
Your minister/priest	428	4.07	1.06
Your child's coach	425	4.11	1.07
People on TV or other celebrities	437	4.32	1.15

Q-16b. Please describe any other organizations or people which have made a difference in your child's interest and achievement in school. (n = 451)

**Top Mentions**

- 54.3%** Not reported
- 10.6%** Family member/Foster Parents
- 9.1%** Teacher/Coach
- 8.0%** Church/Christian Group
- 3.8%** Boy Scouts/Girl Scouts
- 3.3%** Sports/Cheerleading

Q-17. How often do you do each of the following with your child?

	n	Never	Not Within the Last Year	Less Than Once a Month	Once or Twice a Month	Once or Twice a Week	Daily	Not reported
Talk with him/her about how he/she is doing in school	451	0.2%	0.0%	0.2%	3.1%	23.9%	72.1%	0.4%
Help do homework	451	4.0%	3.3%	6.9%	13.5%	25.5%	46.1%	0.7%
Emphasize the importance of doing well in school in order to be successful	451	0.2%	0.2%	3.1%	10.4%	32.6%	52.8%	0.7%
Talk with him/her about life outside of school and how it relates to what he/she is studying in school	451	1.3%	1.6%	8.4%	22.0%	32.2%	33.9%	0.7%
Talk with him/her about college options	451	5.5%	7.5%	30.2%	31.3%	18.0%	6.9%	0.7%
Talk with him/her about what he/she would like to do after they finish high school	451	1.3%	2.9%	21.1%	39.5%	23.7%	10.6%	0.9%
Talk with him/her about what you do and the training you needed in school to do your job (if not applicable, leave blank)	451	2.7%	4.4%	23.1%	22.8%	22.6%	13.3%	11.1%

Q-18. How often do you talk with your child's teacher or school counselor about how he/she is doing in school? (n = 451)

- 18.0%** Weekly
- 26.4%** A couple of times a month
- 45.9%** Less than once a month
- 6.7%** Not within the last year
- 2.7%** Never
- 0.4%** Not reported

Q-19. How does your child prefer to learn about new things? Please select all that apply. (n = 451)

- 90.0% Hands-on approach
- 65.4% Written formats (books, magazines, etc.)
- 63.2% Computer/Video games
- 38.6% Video
- 37.7% Television
- 16.9% Radio/Audiotape
- 6.7% Other
  - Talking with parents/Studying with parents (n = 9)*
  - Discussions with other people (n = 7)*
  - Internet (n = 2)*
  - Experiments/Demonstrations (n = 2)*
  - Church (n = 1)*
  - One-on-one (n = 1)*
  - Live lecture (n = 1)*
  - Teachers (n = 1)*
  - Travel (n = 1)*
  - Classes offered by community college (n = 1)*
  - Group work/talking (n = 1)*
  - On her own research (n = 1)*
  - Power-point, over-head projectors (n = 1)*
  - Organized activities through school and scouts (n = 1)*
- 0.2% Not reported

## SCHOOL INTERESTS

### *Questions Regarding Mathematics*

Q-20a. When you think of “mathematics,” what is the first word or phrase that comes to mind? (n = 451)

#### Top Mentions

- 14.0% Numbers
- 11.3% Not reported
- 10.2% Necessary in life/Important
- 8.0% Algebra
- 7.3% Adding/Addition
- 6.2% Hard/Difficult

Q-20b. Please rate your level of ability in the area of mathematics. (**n = 449, mean = 3.49, std. dev. = 0.93**)

**2.9%** 1 = Well below average  
**8.2%** 2 = Somewhat below average  
**39.4%** 3 = Average  
**35.4%** 4 = Somewhat above average  
**14.0%** 5 = Well above average

Q-20c. Please rate your child's level of ability in the area of mathematics.  
(**n = 449, mean = 3.68, std. dev. = 0.98**)

**2.7%** 1 = Well below average  
**7.8%** 2 = Somewhat below average  
**29.2%** 3 = Average  
**39.4%** 4 = Somewhat above average  
**20.9%** 5 = Well above average

Q-20d. Please rate each of the following descriptions for your level of agreement.

Scale: 1 = Strongly Disagree to 5 = Strongly Agree

	n	mean	std. dev.
My child does not see any connection between the mathematics he/she is learning in school and what goes on outside of school.	443	2.41	1.20
My child will need a good knowledge of mathematics in order to do well in his/her chosen career or trade.	439	4.33	0.84
You have to know at least some mathematics to do most jobs.	450	4.56	0.68
Math is among my child's favorite subjects in school.	445	3.32	1.25
My child would like mathematics more if it were made more interesting.	437	3.33	1.12
Math is too hard for my child.	442	1.77	0.88
My child is doing well in mathematics.	436	3.94	1.09
The inability of other students to keep up is holding my child back in mathematics.	434	2.40	1.01
At my child's school, if students do well in math, they are considered a "nerd."	434	2.16	1.01
At my child's school, students can do well in math and still be considered "cool."	437	3.88	0.96
My child knows where to go when he/she needs help in mathematics.	442	4.04	0.93
I find it difficult to help my child when he/she has questions about mathematics.	446	2.69	1.33
My child needs help in mathematics, but his/her teacher does not have the time to help him/her.	427	2.14	1.10
My child's mathematics teacher encourages him/her to do better.	435	3.91	0.89
I encourage my child to do better in mathematics.	441	4.39	0.78
My child's teacher(s) doesn't explain mathematics in a way that helps my child to understand it.	439	2.28	1.06
Some children just can't do mathematics.	446	2.48	1.10
Math is more important for boys than it is for girls.	446	1.52	0.89
Math just isn't very important for children who don't plan to go to college.	446	1.49	0.90

*Questions Regarding Science*

Q-21a. When you think of “science,” what is the first word or phrase that comes to mind? (n = 451)

Top Mentions

**14.2%** Not reported  
**12.0%** Experiments  
**7.1%** Interesting  
**6.4%** Biology  
**4.2%** Fun  
**3.8%** Labs

Q-21b. Please rate your level of ability in the area of science. (n = 449, mean = 3.36, std. dev. = 0.92)

**2.4%** 1 = Well below average  
**10.9%** 2 = Somewhat below average  
**47.2%** 3 = Average  
**26.9%** 4 = Somewhat above average  
**12.5%** 5 = Well above average

Q-21c. Please rate your child’s level of ability in the area of science. (n = 447, mean = 3.65, std. dev. = 0.87)

**1.6%** 1 = Well below average  
**4.9%** 2 = Somewhat below average  
**37.4%** 3 = Average  
**39.4%** 4 = Somewhat above average  
**16.8%** 5 = Well above average

Q-21d. Please rate each of the following descriptions for your level of agreement.

Scale: 1 = Strongly Disagree to 5 = Strongly Agree

	n	mean	std. dev.
My child does not see any connection between the science he/she is learning in school and what goes on outside of school.	427	2.26	1.04
My child will need a good knowledge of science in order to do well in his/her chosen career or trade.	429	3.89	0.93
You have to know at least some science to do most jobs.	440	3.65	0.94
Science is among my child's favorite subjects in school.	421	3.47	1.04
My child would like science more if it were made more interesting.	419	3.28	1.08
Science is too hard for my child.	433	1.70	0.75
My child is doing well in science.	415	4.11	0.83
The inability of other students to keep up is holding my child back in science.	413	2.27	0.93
At my child's school, if students do well in science, they are considered a "nerd."	429	2.15	0.90
At my child's school, students can do well in science and still be considered "cool."	427	3.78	0.97
My child knows where to go when he/she needs help in science.	426	4.06	0.80
I find it difficult to help my child when he/she has questions about science.	431	2.30	1.05
My child needs help in science, but his/her teacher does not have the time to help him/her.	402	2.11	0.95
My child's science teacher encourages him/her to do better.	409	3.87	0.82
I encourage my child to do better in science.	418	4.21	0.75
My child's teacher(s) doesn't explain science in a way that helps my child to understand it.	412	2.22	0.95
Some children just can't do science.	439	2.21	1.04
Science is more important for boys than it is for girls.	440	1.47	0.73
Science just isn't very important for children who don't plan to go to college.	437	1.81	0.90

Q-22. What would make mathematics and science more interesting for your child? (n = 451)

**Top Mentions**

- 36.4% Not reported**
- 27.9% More of a hands-on approach/More experiments**
- 8.9% Show practical applications/Make it relate to real life**
- 7.3% Better teachers**
- 3.8% Make it fun**
- 3.1% More group projects**

Q-23. Please rate the quality of the public schools in your community. (If you feel you are not familiar enough to rate it, please leave the responses to this question blank.)

Scale: 1 = Very Low Quality to 5 = Very High Quality

	<b>n</b>	<b>mean</b>	<b>std. dev.</b>
Elementary School	<b>394</b>	<b>3.90</b>	<b>0.89</b>
Middle School	<b>394</b>	<b>3.47</b>	<b>0.93</b>
High School	<b>359</b>	<b>3.42</b>	<b>1.14</b>

### **DEMOGRAPHICS**

Finally, please answer the following questions, so that we can group your responses with those of others participating in this survey. Your answers are completely confidential.

D-1. What is your relationship with the child? (**n = 451**)

- 77.6%** Natural mother
- 16.4%** Natural father
- 3.3%** Other female guardian
- 0.7%** Other male guardian
- 1.3%** Grandmother
- 0.7%** Not reported

D-2. What is the highest level of education you have completed? (**n = 451**)

- 4.0%** Less than high school
- 18.6%** High school graduate/GED
- 15.1%** Business/Trade/Other 2-year program
- 24.4%** Some college
- 17.1%** Bachelor's degree
- 3.3%** Some graduate school
- 11.5%** Master's degree
- 1.3%** Doctorate (Ph.D.)
- 1.8%** Professional degree (law, medicine)
- 2.7%** Other
  - Educational Specialist Degree (n = 11)*
  - CCT License (n = 1)*
- 0.2%** Not reported

D-3. What do you do for a living? (n = 451)

Top Mentions

- 13.7% Homemaker/Stay at home
- 13.1% Teacher/Professor
- 8.2% Administrative/Support Services
- 5.1% Manager
- 4.2% Business Owner

D-4. How would you describe your current marital status? (n = 451)

- 82.0% Married (RESPONDENT ANSWERS D-5 AND D-6)
- 3.1% Single, never married
- 12.6% Divorced/separated
- 1.8% Widowed
- 0.4% Not reported

D-5. If applicable, what is the highest level of education your spouse/partner has completed? (n = 370)

- 8.6% Less than high school
- 23.2% High school graduate/GED
- 14.3% Business/Trade/Other 2-year program
- 18.4% Some college
- 17.0% Bachelor's degree
- 2.4% Some graduate school
- 9.5% Master's degree
- 1.4% Doctorate (Ph.D.)
- 3.0% Professional degree (law, medicine)
- 1.4% Other
  - Military education (n = 4)*
  - Work training (n = 1)*
- 0.8% Not reported

D-6. What does your spouse or partner do for a living? (n = 370)

Top Mentions

- 9.5% Business Owner
- 9.5% Manager
- 6.2% Homemaker/Stay at home
- 4.6% Engineer
- 4.6% Mechanic/Automotive
- 4.6% Truck driver

D-7. How would you describe your ethnic background? (n = 451)

- 0.4%** Asian
- 0.7%** Native Hawaiian/Pacific Islander
- 7.3%** Black/African American/Afro-Caribbean
- 1.8%** Hispanic
- 87.6%** White/Caucasian
- 0.7%** Multi-racial
- 1.6%** Prefer not to report

D-8. Finally, what was your household's approximate income last year before taxes? (n = 451)

- 12.9%** \$30,000 or less
- 25.1%** \$30,001 - 60,000
- 31.3%** \$60,001 - 100,000
- 18.8%** Over \$100,000
- 0.7%** Do not know
- 11.3%** Prefer not to report

All participants in this research will be entered in a drawing for a cash prize. The information requested below will be used only for the prize drawing. Your name will not be connected in any way with your responses to the survey questions. (If you would rather submit your name and contact information separate from your data, please email your name, address, phone number and email address to Shane Karcz at [skarcz@maguireassoc.com](mailto:skarcz@maguireassoc.com) with "Enter Me Into the Prize Drawing" noted in the subject line.)

Please record your name, address, and phone number:

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

Email Address: \_\_\_\_\_

Thank you for participating in this research!