



# The SECME Toolbox

## THE SECME TOOLBOX

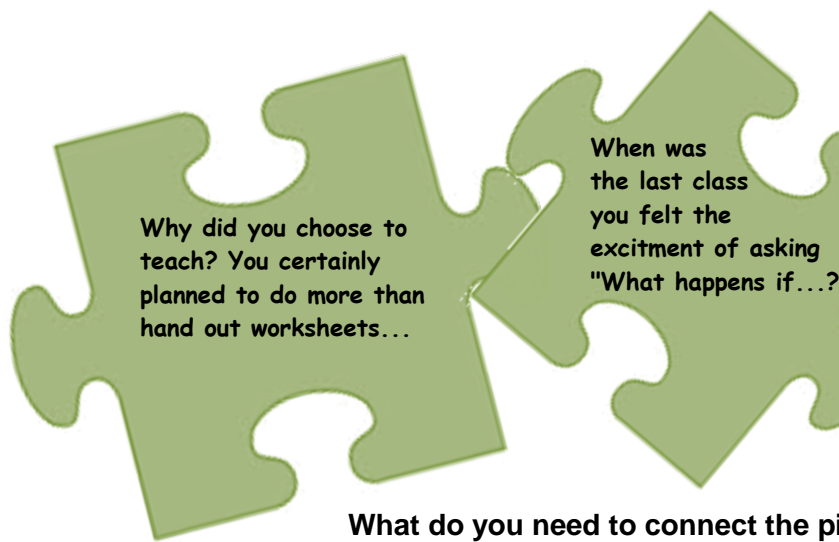
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**What do you need to connect the pieces and put your SECME Program together?**

Your Program puzzle needs the pieces that frame the picture.  
Your Program puzzle needs you and your students to decide "what's next?"

**Is a SECME Program a school club?**

An afterschool club is the most common SECME Program design.  
HOWEVER, there are many different designs --  
Afterschool, an elective class, or using SECME content to enhance your classroom teaching --  
all of these designs are SECME Programs.  
It's your puzzle to design to meet the needs of your students, your school, your district...

**What do you want your SECME Program to look like?**

Is it part of your class day or an afterschool program?  
What are your district's STEM goals, your school's goals, your goals for your students?  
What supplies will you need?  
Embrace this opportunity to design your SECME time and go beyond the "typical."  
Develop your SECME "Implementation Plan" as a creative road map of activities, labs, speakers, and competition preparation.  
This is your opportunity to enhance teaching and learning experiences.

Your Program puzzle needs you to fill in the picture details with all the pieces that make a SECME Program robust, engaging, and impactful for your students!

**Part of the SECME experience is engaging student interest in STEM through competitions.**

What makes SECME impactful is that you don't give your students the answers:  
you provide the framework and formula.  
SECME's Engineering Design competitions require inventive thinking and design, building, testing, re-design, re-testing, checking formulas, and finally building a "better" Mousetrap Car, Water Rocket, or VEX Robot.  
The Internet Science and Technology Fair and eCYBERMISSION competitions allow time for deep research into STEM topics guided by an online mentor.  
SECME kids can participate in these SECME National Competitions along with others like bridge building, egg drop, and other robotics platforms. SECME encourages you to open the door to all possible avenues for STEM learning.

On the following pages you have  
**The SECME Toolbox:**  
**Your SECME Implementation Plan Workbook**  
to finish your SECME Program Puzzle.

**The SECME National Office is just an email away if you have questions: [secme@coe.gatech.edu](mailto:secme@coe.gatech.edu)**

## THE SECME TOOLBOX



THE SECME TOOLBOX is a guide and reference for new and engaging SECME Programs. It provides the basic information needed to design a local SECME program to meet the needs of your students and goals of your district, school, or organization. The SECME Toolbox is divided into sections. Please refer to the section that is applicable to your SECME program site:

### *I. Nuts and Bolts for Public and Private Schools*

### *II. Nuts and Bolts for Informal STEM Learning (ISL) Partners* (Multi-Site and Single-Site)

Both *Nuts and Bolts* include the following information:

#### *A. Getting Started*

- 1) Quick Reference
- 2) The Details

#### *B. Implementation Plan*

Overview

#### *C. Compliance Information*

Commitment Forms

THE SECME TOOLBOX also has a *Nails and Hammer* section that has resources for all SECME Programs:

*Four Year Plan for SECME Program Growth*

*Implementation Plan Worksheets*

*Local and Regional SECME Programing Activities Calendar Samples*

*National Competition Quick Reference Guide*

*Sample Student Membership and Parent Consent Forms*

## *II. Nuts and Bolts for Public and Private Schools*

**Before we get started, we know you have questions...here's a few we are frequently asked:**

#### ***What does SECME stand for?***

When SECME was founded in 1975, it was called the "Southeastern Consortium of Minorities in Engineering." Today, SECME programs are found all over the country and our focus includes STEM disciplines (science, technology, engineering, and math). Because of our SECME name recognition, the Board determined to keep the acronym and include a tag-line. We are officially: SECME, Inc.: Diversity in STEM Education. By way of helping to familiarize students and parents to their local SECME programs, many local programs choose to unofficially use: Science, Engineering, Communications, Math Enrichment.

#### ***What if I don't have a "formal" SECME Program but do SECME activities in my classroom? Am I eligible for a SECME Mini-Grant? Can my students compete?***

Yes and Yes! As long as your school and student informaion is updated, you and your students are eligible. Please remember, your students can compete in the SECME Nataional Essay Competition!

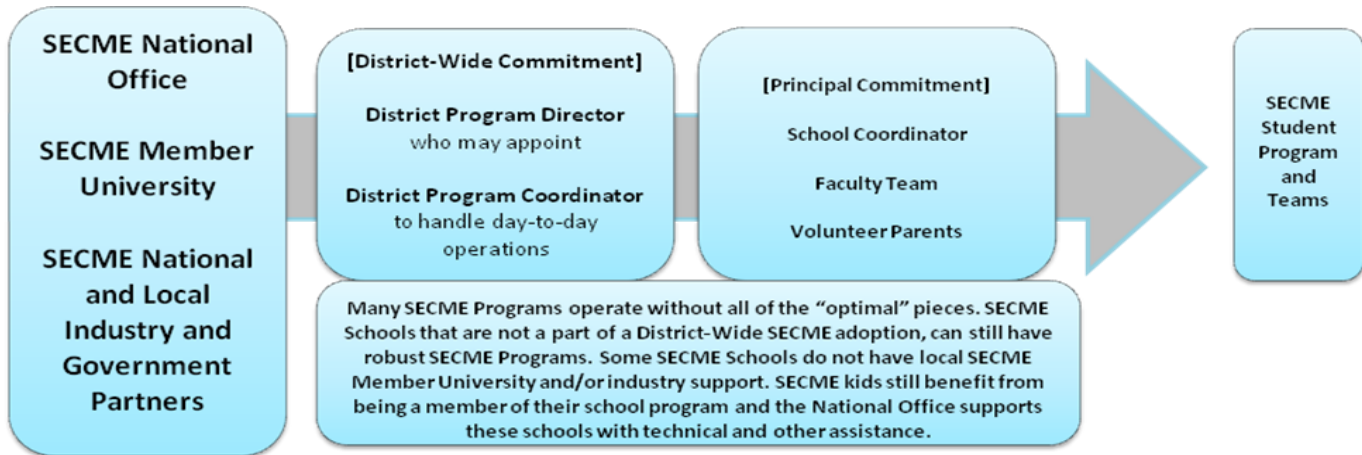
#### ***Where can I find the SECME Student Competition Guidelines?***

Each year, the SECME Student Competition Guidelines are updated for that school year and re-posted on [www.secme.org](http://www.secme.org) behind the password protected portal. You must have a registered SECME program and obtain a code to access the password protected portal.

#### ***What is the difference between a local, Regional, and National SECME competition?***

SECME competitions can be held as part of other student competitions at an "unoffical" single school or multi-school event. Student teams may or may not continue on to official Region competitions. Official Region Competitions are hosted for SECME programs registered in the SECME National Database. Region Competitions can include some or all of the official five SECME Student Competitions and may include other competitions (such as bridge building, egg drop, etc.) that are not "official" SECME Competitions. It is the intent that the SECME Region Host or local organization will sponsor the middle and high school first place SECME Engineering Design Mousetrap Car teams and chaperones to the SECME National Student Competition held at a different Member University campus each summer. SECME National also encourages local sponsorship of Robitics winning teams to the SECME National Student Competition.

Being a part of a SECME program at your school can be one of the most rewarding experiences of your educational career. When starting a SECME program, one of the first questions that comes to mind is “How Do I Get Started?” Let's start with what an "optimal" SECME framework looks like and then give you a few ideas that may assist you while planning your school's SECME program.



### **A.1 GETTING STARTED OVERVIEW: ""QUICK GUIDE" for New SECME District Program Directors and District Coordinators**

- ✓ Contact the National Office. We will guide you through the process of registering the schools in your districts in the SECME database. School Coordinators will not be able to register their schools or students with SECME until you have completed this process.
- ✓ Review all sections of this [Nuts and Bolts](#) document so that you are familiar with your role and the role of your School Coordinators. SECME National will consider the district PD as the point of contact for programmatic information from SECME.
- ✓ Ensure that all new School Coordinators have their *Principal Commitment Form* submitted to the National Office. School Coordinators will not be able to register their schools or students with SECME until we have this form on file.

### **A.1 GETTING STARTED OVERVIEW: ""QUICK GUIDE" for New SECME School Coordinators**

- ✓ Submit the *Principal's Commitment Form* to the SECME National Office by email or fax. This is a requirement for all new participating schools, whether there is a SECME District Program Director in place or not. [Form can be found in this document and is a separate link at [www.secme.org](http://www.secme.org) in the "Resources and Forms" page.]
- ✓ Upon receipt of the *Principal's Commitment Form*, the National Office will correspond with you about next steps, including how to register your school's SECME program and "enrolling" participating students using our online School Registration and Student Manager database.
- ✓ Review the [Nuts and Bolts](#) document to begin to shape your program's focus. National will discuss this with you as we help you with your next steps.
- ✓ If you think there might have been a SECME program at your school at some time in the past, check with your school administration and/or the previous SECME School Coordinator to see if a "SECME Implementation Plan" exists for your school. This plan will provide you with such items as past SECME program goals, objectives, and activities. Implementation Plans should be reviewed and updated annually. Use the former Plan to identify items that need to be changed in order to make your SECME Program more relevant for your current SECME students.

## A.2 GETTING STARTED OVERVIEW: THE DETAILS

*This TOOLBOX section is designed to help with establishing your program by providing a basic outline of program activities and SECME national competitions, as well as other valuable information you might need.*

1. Consider your program's focus. A successful SECME program is one that meets the needs of students on a variety of academic levels. Through SECME competitions, students are trained in scientific and research methodologies and are asked to solve real-world engineering problems. However, SECME is much more than engineering design competitions. SECME provides students with the opportunity to develop a comprehensive educational plan designed to prepare them to be successful in STEM educational programs through college and into their chosen professions. Therefore, it is important to plan a program that will support your school's efforts with the following experiences:

- Career and occupational orientations
- College and university visitations
- Mentoring and internship programs with local industries
- Problem-solving strategies and higher-level thinking skills
- Comprehensive test preparation for exams i.e., PSAT, SAT, PLAN, and ACT exams

2. Establish what your SECME program looks like and your role and responsibilities. To begin, it will be helpful to understand the "optimum" structure for SECME programs: *SECME Faculty Team headed by a School Coordinator → SECME Program Director who oversees multiple SECME schools and your SECME Member University Partner → SECME National.* Well, this optimum structure is not available to all of our SECME schools - but the SECME program can be just as impactful. However, it is good to know all the roles and responsibilities so that you can determine how to cover all tasks that will help your SECME program to become robust.

The SECME Program Director has responsibility of supporting SECME schools by coordinating meetings, helping to design and oversee activities and local competitions, and submitting all reports needed at SECME National. The SECME School Coordinator takes the lead within the school and has responsibility for report submissions, etc. SECME National offers technical support and helps to facilitate university and industry support. If possible, SECME National will work to establish a Program Director in districts where more than three schools have SECME programs.

### SECME Program Director

- Identify schools within district where a SECME program will have an impact
- Identify those schools participating in SECME; **update annually in the SECME National database** (required)
- Work with School Coordinators in designing Implementation Plans that reflect district STEM focus
- Coordinate/facilitate district meetings
- Act as liaison to university to coordinate Region competition
- Encourage and attempt to secure funding for educator participation in SECME Annual Summer Institute

### SECME School Coordinator

- Design school Implementation Plan that aligns activities to district needs
- Coordinate school activities to include competition preparation
- **Register school with SECME National database** (required); **update annually in the SECME National database** (required)
- **Enroll students with SECME National database** (required); **update annually in the SECME National database** (required)
- Oversee students' on-line self-reporting process
- **Submit school Annual Report to SECME National** (required)

3. Establish a school Faculty Team where applicable. The SECME Program Director should assist School Coordinators with designating a Faculty Team. In the absence of a district level Program Director, a School Coordinator should feel comfortable with taking on this task.

A. If possible, select two, three, or more staff members from your school to serve on the SECME Faculty Team. These staff members might include a math teacher, a science teacher, a technology teacher, a guidance counselor, and/or an assistant principal. This SECME team, led by the SECME School Coordinator, will work together to develop

and carry out the SECME program plan. \* At the high school level, National strongly recommends including a counselor or career coach to help with the dissemination of SECME scholarship and other college information.

4. Establish the year's SECME activities and meeting calendar. The School Coordinator is encouraged to begin advertising the program. Think about using public address announcements, posters, flyers to teachers and students, classroom visits, etc. Make sure all advertising materials include the date, time, and location of the first SECME meeting of the year. Remember, you can incorporate SECME into an existing pre-college program or student group, for example: Math & Science Education Network (MSEN) or Youth Engineering Society (YES), Math Club; Science & Technology Club, Engineering Club, etc.

5. The first meeting! Try to include both students and parents (if possible) and focus on a general orientation and registration meeting. A sample agenda for this meeting might include:

- An overview of the SECME program (brochure)
- Goals and objectives
- Calendar of events and schedule of club meetings
- Competitions
- Membership requirements (if determined by school regulations)
- Distribution and collection of completed student membership application forms
- Refreshments

6. Have fun! Following the first general meeting, continue to advertise your SECME program. If your SECME program is club-like in design, once a core group of students who attended the first general meeting get involved in the program, they can establish duties of club officers.

7. "Enroll" your SECME students! Students participating in your SECME program must be "enrolled" with the SECME National Office using our online *Student Management System*. Please keep the SMS current by updating your records (and your district's if you have a district-wide program) as often as you need to.

8. Gather needed program supplies. Once you have determined the SECME national competitions and activities in which your SECME group or club will participate, you must begin gathering the materials and supplies your students need to get started. It is not necessary to supply students with everything they need. Allow students to be creative in the designs and in the materials they use. They will collect some of the needed materials on their own. For example, when building the Mousetrap Car, provide the students with one victor mousetrap. Challenge them to gather household materials and other sources for the materials they need. Don't let them go too long without needed materials. Provide materials they can't locate to avoid frustration.

9. Embrace your unique SECME program design! Remember, how a SECME program is initiated at each school site varies. Select the implementation method that best meets the needs of your student population. Here are a few more suggestions:

- Meet at least once every week or two after school if you are an afterschool program
- Include other disciplines in developing projects (ex.: English Department when writing essays)
- Offer SECME as an elective course (daily experience)
- Offer SECME as a part of your after-school program, if possible
- Combine activities with a SECME school in your area
- Combine SECME Competitions with other established science/math related competitions at your school or in your region
- Make your's a "SECME Classroom" – or better, yet, a "SECME School" with every teacher trained to integrate hands-on, inquiry- and standards-based teaching in their classrooms

10. Attend all district-level SECME Program Director's meetings, if applicable. These meetings facilitated by the Program Director will keep you updated on all SECME information and provide additional ideas on how to manage your SECME program.

## B. SECME IMPLEMENTATION PLAN

***Suggested Items to include thinking about Who, What, When, Where, and How. We have provided a blank Implementation Plan Worksheet in the Nails and Hammer section.***

### Who

- List Contacts and their information, including your SECME Master Teacher's information (if you have attended an Annual SECME Summer Institute), Program Director, and University Partner
- Faculty Team Members
- Student Members

### What

- Align your program goals with your district goals. We have provided a sample in this section.

### When

- Determine when you will conduct your program

### Where

- Determine what activities you plan to have. Think about the following:
  - Career counseling
  - Field trips
  - Club activities
  - Speakers, films, video tapes
  - Engineering and math competitions
  - Science fairs
  - Math Counts and JETS (Junior Engineering Technical Society)
  - Other Contests (Drop It-Build It-Fly It)
  - Induction and awards ceremonies
  - Role models and mentors
  - Programs with feeder schools
  - Involvement with professional organizations (NSBE, MSME)
  - Career exploration technical portfolios
  - Study skills and time management
  - Oral presentations
  - Comprehensive test preparation, i.e., PSAT, PLAN, SAT, ACT
- Determine what competitions your students will enter

### How

- Register your SECME school and enroll your SECME students in the SECME National Office online database. This is a secure site. You must obtain a code to create a password to logon to enter this site. For new programs, this process begins when the National Office receives your Principal's Commitment form. Once you do so, follow the prompts/instructions.  
Note: Schools are registered using the "School Registration" database; students are "enrolled" using the "Student Management System"
- Determine your student recruitment plan  
What will your process be for recruiting a broad spectrum of students, with focus on ways to attract those who would not "typically" be a part of a STEM-oriented program?
- Determine how you are going to engage and use volunteer parents
- Identify local organizations that you can contact for support (university, business/industry, Adopt-A-School, cooperative programs, internships, Saturday/summer programs, museum programs, professional organizations)
- Determine what supplies you might need
- Determine your budget need
- Align your school calendar and your SECME calendar



## Sample of how to align your program goals with your district goals

[Example Adapted From: 2010 DeKalb County High School Science Instructional Goals, Georgia]

District Goal	How can SECME Help?
<p><b>Goal 1:</b>  <b>To increase the passage rate on the biology and physical science EOCT</b></p> <ul style="list-style-type: none"> <li>▪ <b>Provide content training</b> for biology and physical science teacher</li> <li>▪ <b>Provide training in differentiation instructional strategies</b> for biology and physical science teachers</li> <li>▪ <b>Provide pedagogy training to address the needs of our SWD and ELL science students</b></li> <li>▪ Provide teachers with sequencing and pacing guides for biology and physical science</li> <li>▪ Provide teachers with benchmark exams for biology and physical science</li> <li>▪ Provide teachers with data analysis training to modify instruction based on student needs</li> <li>▪ Conduct informal and formal observations</li> <li>▪ <b>Provide teachers with additional on-going support</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ Modules = hands-on standards-based learning environments</li> <li>▪ Program activities = expose them to and prepare them to compete in a scientific community</li> <li>▪ Modules = help me with differentiated instruction strategies  Modify my instruction based on student needs</li> <li>▪ Support &amp; ideas from my Master Teacher mentor  Support &amp; ideas from university and industry  Support &amp; ideas from Nat'l Office</li> </ul>
<p><b>Goal 2:</b>  <b>To increase the passage rate of students on the science portion of the Georgia High School Graduation Test</b></p> <ul style="list-style-type: none"> <li>▪ <b>Increase student content knowledge</b> in biology and physical science</li> <li>▪ Provide teachers with <b>remediation resources and strategies</b> for the GHSSGT</li> <li>▪ <b>Require high school science teachers to include scientific research</b> with all students</li> <li>▪ Provide all eleventh grade students with the science predictor test</li> <li>▪ Monitor instruction</li> </ul>	<ul style="list-style-type: none"> <li>▪ Modules = grounded in national standards – I can align to my state and district</li> <li>▪ Activities = research included as part; mentors as guides</li> </ul>
<p><b>Goal 3:</b>  <b>To expose our students to rigorous and current scientific experiences</b></p> <ul style="list-style-type: none"> <li>▪ Provide teachers with <b>training in current scientific technology</b></li> <li>▪ Provide teachers with <b>opportunities to attend science conferences</b></li> <li>▪ Provide teachers with <b>grant opportunities</b> that support our scientific instructional program</li> <li>▪ Work <b>collaboratively</b> with high learning institutes, industry, and businesses who support our scientific instructional program</li> <li>▪ Work collaboratively with <b>science supervisors nationally</b></li> <li>▪ Increase the number of students participating in various <b>science competitions</b></li> <li>▪ Increase the number of AP science offerings in all high schools</li> <li>▪ Provide teachers with best practice training for students in AP courses</li> <li>▪ <b>Increase the number of elective science offerings</b> in all high schools</li> </ul>	<ul style="list-style-type: none"> <li>▪ SECME Annual Summer Institute and Regional Workshops</li> <li>▪ Regular contact from SECME: about other national and regional opportunities</li> <li>▪ Regular contact from SECME: grant opportunities</li> <li>▪ SECME partnership model: universities and industry collaboration with SECME schools</li> <li>▪ SECME Master Teachers and mentors from universities and industry</li> <li>▪ SECME course as an elective</li> </ul>



### C. SECME COMPLIANCE INFORMATION

Since 1975 SECME, Inc. has continued its strong history of supporting STEM education initiatives by positioning ourselves as the conduit to create alliances of K-12 schools, engineering universities, and industries and government agencies.

It is critical for SECME school and district programs, in partnership with the SECME National Office, to demonstrate value to our university and funding supporters. As a nonprofit organization that encourages inclusion not based on financial return on investment, it is important that we establish other measures as “requirements” to be considered a “SECME Program.”

To be considered “compliant,” the requirements to be a participating SECME Program from the SECME National Office perspective include the following basic requisites:

#### School District Program Directors

Not all SECME programs have SECME Program Directors at the District-level. A goal for SECME National is to encourage district leadership to designate a SECME Program Director for all districts with more than three participating SECME schools. The District Program Director has responsibility for guiding School Coordinators and for following:

- Registering new participating schools and updating the district profile in the SECME National database for the current school year.
- Communicating with SECME National as to the status of district schools participating in SECME.
- Working with School Coordinators to ensure school compliance.
- Working with a local University Partner to coordinate regional/state SECME competition.
- Working with school principals, other district personnel, and the SECME National Office to coordinate SECME teacher training and professional development through the Annual SECME Summer Institute.

#### School Coordinators

All SECME schools are required to have a point of contact who is responsible for guiding a school SECME Program and for submitting data to the National Office. **A new SECME program's lead SECME faculty member, or School Coordinator, should request their Principal has signed and faxed or emailed the "Principal Commitment Form" to the SECME National Office. National will begin the registration process and send the School Coordinator instructions on how to access the online database and complete the school registration and "enroll" participating students.** School Coordinators have responsibility for the following:

- Updating school profile annually for the current school year in the SECME National database.
- Identifying students participating in SECME by "enrolling" new students and by updating existing students in the SECME Student Management System database.
- Ensuring SECME students participate (as a class project, at the school or local competition level, or at a regional competition level) in a minimum of one SECME National sanctioned competition.
- Completing SECME National Annual Summer Report.
- Encouraging and facilitating SECME students to complete SECME National Student Surveys.

C.1 SECME Commitment Form



DISTRICT COMMITMENT FORM

**SAMPLE**

TO: SECME, INC.

FROM: \_\_\_\_\_  
(Name School District)

Our district wishes to establish SECME programs in our district. I have assigned the administrators named below to serve as SECME liaisons.

\_\_\_\_\_  
Official Program Director

\_\_\_\_\_  
Email address

\_\_\_\_\_  
District Coordinator Name  
(if applicable)

\_\_\_\_\_  
Email address

\_\_\_\_\_  
Superintendent Signature  
(or designee)

\_\_\_\_\_  
Date

**Please email or fax to the SECME National Office  
(404) 894-6553  
secme@coe.gatech.edu**

**ALL Forms can be downloaded from the "Toolbox" located on our homepage at  
secme.org**

C.1 SECME Commitment Form



PRINCIPAL'S COMMITMENT FORM

**SAMPLE**

TO: SECME, INC.

FROM: \_\_\_\_\_  
(Name of School and School District)

My school wishes to establish a SECME program at our school. I have assigned the teacher named below to serve as the SECME School Coordinator.

\_\_\_\_\_  
Teacher's Name

\_\_\_\_\_  
Teacher's Email address

\_\_\_\_\_  
Principal's Name

\_\_\_\_\_  
Principal's Email address

\_\_\_\_\_  
Principal's Signature

\_\_\_\_\_  
Date

Please email or fax to the SECME National Office  
(404) 894-6553  
secme@coe.gatech.edu

**ALL Forms can be downloaded from the "Toolbox" located on our homepage at [secme.org](http://secme.org)**



**ISL Education Partner**  
**\*Informal STEM Learning**  
**Commitment Form**

**SAMPLE**

TO: SECME, INC.

FROM: \_\_\_\_\_ , \_\_\_\_\_  
(ISL Organization Director) (Title)

ISL ORGANIZATION: \_\_\_\_\_

EMAIL: \_\_\_\_\_ PHONE: \_\_\_\_\_

My organization wishes to establish a SECME program at our site. As the ISL Organization Director (referred to as a SECME District Program Director in a school district setting), I am authorized to make program decisions for our organization and I have assigned the individual named below to serve as the SECME Site Coordinator (referred to as a SECME School Coordinator in school settings).

As an ISL Education Partner, we agree to represent and acknowledge our affiliation with SECME Inc. for program activities, resources, and documents provided for the purposes of SECME program implementation and participation.

\_\_\_\_\_  
ISL Organization Director's Signature

\_\_\_\_\_  
Date

ISL Site Name: \_\_\_\_\_

SECME Site Coordinator's Name: \_\_\_\_\_

SECME Site Coordinator's Email address: \_\_\_\_\_

SECME Site Coordinator's Phone: \_\_\_\_\_

**Please email or fax to the SECME National Office**  
**(404) 894-6553**  
**secme@coe.gatech.edu**

**ALL Forms can be downloaded from the "Toolbox" located on our homepage at [secme.org](http://secme.org)**



**ISL Education Partner**  
**\*Informal STEM Learning**  
**Commitment Form**

**SAMPLE**

TO: SECME, INC.

FROM: \_\_\_\_\_ , \_\_\_\_\_  
(ISL Organization Director) (Title)

ISL ORGANIZATION: \_\_\_\_\_

EMAIL: \_\_\_\_\_ PHONE: \_\_\_\_\_

My organization wishes to establish a SECME program at multiple sites. As the ISL Organization Director (referred to as a SECME District Program Director in a school district setting), I am authorized to make program decisions for our organization and I have assigned the individual named below to serve as the SECME Site Coordinator (referred to as a SECME School Coordinator in school settings).

As an ISL Education Partner, we agree to represent and acknowledge our affiliation with SECME Inc. for program activities, resources, and documents provided for the purposes of SECME program implementation and participation.

\_\_\_\_\_  
Organization Director's Signature

\_\_\_\_\_  
Date

**Please list all eligible ISL site information on page two.**  
**Please copy page 2 and enter additional site information if you have more than four sites.**

**Please email or fax to the SECME National Office**  
**(404) 894-6553**  
**secme@coe.gatech.edu**

**ALL Forms can be downloaded from the "Toolbox" located on our homepage at [secme.org](http://secme.org)**

**Multiple ISL SECME Site Information**  
(please copy this page and use for additional sites)

**SAMPLE**

ISL Site Name: \_\_\_\_\_

SECME Site Coordinator's Name: \_\_\_\_\_

SECME Site Coordinator's Email address: \_\_\_\_\_

SECME Site Coordinator's Phone: \_\_\_\_\_

ISL Site Name: \_\_\_\_\_

SECME Site Coordinator's Name: \_\_\_\_\_

SECME Site Coordinator's Email address: \_\_\_\_\_

SECME Site Coordinator's Phone: \_\_\_\_\_

ISL Site Name: \_\_\_\_\_

SECME Site Coordinator's Name: \_\_\_\_\_

SECME Site Coordinator's Email address: \_\_\_\_\_

SECME Site Coordinator's Phone: \_\_\_\_\_

ISL Site Name: \_\_\_\_\_

SECME Site Coordinator's Name: \_\_\_\_\_

SECME Site Coordinator's Email address: \_\_\_\_\_

SECME Site Coordinator's Phone: \_\_\_\_\_

**Please email or fax to the SECME National Office**  
**(404) 894-6553**  
**secme@coe.gatech.edu**

**LL Forms can be downloaded from the "Toolbox" located on our homepage at [secme.org](http://secme.org)**

**Worksheets**  
**for SECME Implementation Plan: Classroom or Program**  
**Who...What...When...Where...How...**

**Who:** Contacts

WHO	Name	Phone	Email
SECME Master Teacher Mentor			
Program Director			
University Partner Contact			
School Faculty Team Members			
Student Members			



**What:** Align Your Goals

*Use your state, district, or personal goals and determine how what you've learned from SECME can help you meet them.*

District Goal	How SECME Can Help
<b>Goal 1:</b>	
<b>Goal 2:</b>	
<b>Goal 3:</b>	

**When: SECME Checklist**

- ☐ Unit
- ☐ Classroom Activities
- ☐ Afterschool Program  
Days per week/month \_\_\_\_\_
- ☐ Club  
Days per week/month \_\_\_\_\_
- ☐ Saturday Program
- ☐ Summer Program

**Where: Activity Checklist**

- ☐ Engineering Week/Day/Program with University Partner / Date: \_\_\_\_\_
- ☐ Field Trip to Partner Industry: \_\_\_\_\_ / Date(s): \_\_\_\_\_
- ☐ Guest Speaker: \_\_\_\_\_ / Date(s): \_\_\_\_\_
- ☐ Other STEM-related competitions (i.e., Science Olympiad)
  - 1.
  - 2.
  - 3.

**Where: SECME National Competition** [check *SECME National Student Competition Guideline* on Website]Engineering Design Competitions

- ☐ Mousetrap Car
- ☐ Water Bottle Rocketry
- ☐ VEX Robotics

Other SECME National Competitions

- ☐ Internet Science & Technology Fair (ISTF)
- ☐ eCYBERMISSION
- ☐ Essay

**How: Foundation**

Student Recruitment Plan (How will I target under-represented students?)

Parent Engagement Plan (How will I encourage parent involvement?)

What organizations can work with my SECME students? (i.e., Fraternity, Sorority, Church, etc.)

## **How:** Budget

### **Activities**

Science Kits: \$ \_\_\_\_\_

Math Manipulatives: \$ \_\_\_\_\_

Guest Speaker: \$ \_\_\_\_\_

Field Trips: \$ \_\_\_\_\_

Refreshments: \$ \_\_\_\_\_

Awards (certificates, trophies, medals, etc.): \$ \_\_\_\_\_

Misc. (t-shirts, etc.): \$ \_\_\_\_\_

### **Estimated Competition Costs**

Mousetrap Cars (\$5.-10. per): \$ \_\_\_\_\_

ISTF (no cost/mentor name): \_\_\_\_\_

VEX (\$500. per kit): \$ \_\_\_\_\_

Bottle Rocketry (\$20.+misc total): \$ \_\_\_\_\_

eCYBERMISSION (no cost/mentor name): \_\_\_\_\_

### **Public Relations**

- ☐ Newsletter
- ☐ T-Shirts
- ☐ Buttons
- ☐ Local Newspaper
- ☐ Posters Around School

### **Fund Raisers**

PTA/PTO contact: \_\_\_\_\_

Local Businesses: \_\_\_\_\_

Parents/Donations/Dues: \_\_\_\_\_

SECME Mini-Grant: \_\_\_\_\_ (be sure to apply!)

New ideas from the Institute: \_\_\_\_\_

## **HOW:** Resources

- ✓ Check SECME Monthly Online *Spotlight* Newsletter
- ✓ Check SECME Website Resource Page ([www.secme.org](http://www.secme.org))

**How:** Structure – Align your school calendar and SECME calendar

**Note:**

- ✓ Spotlight Online Newsletter first week of every month with SECME National Office updates, teacher and student opportunities, and classroom and club activities
- Make sure secme.org is not spammed by school filter!

**2014-2015 School Calendar**

August 2014						
Su	M	Tu	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

September 2014						
Su	M	Tu	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

October 2014						
Su	M	Tu	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

November 2014						
Su	M	Tu	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

December 2014						
Su	M	Tu	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

January 2015						
Su	M	Tu	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February 2015						
Su	M	Tu	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

March 2015						
Su	M	Tu	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April 2015						
Su	M	Tu	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May 2015						
Su	M	Tu	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June 2015						
Su	M	Tu	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July 2015						
Su	M	Tu	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

## **SAMPLE: SECME Regional Calendar of Events**

### **XYZ University Scholarship Application Deadline: TBA**

TBA.....SECME Annual Banquet

TBA.....Annual SECME Summer Institute

### **XYZ District School Coordinators' Meeting Dates**

September 10 School Coordinators' Meeting.....4:30 P.M. – 6:00 P.M.  
XYZ Meeting Room, XYZ District Office

November 6, 2008 Coordinators' Meeting.....4:30 P.M. – 6:00 P.M.  
XYZ Meeting Room, XYZ District Office

January 22, 2009 Coordinators' Meeting.....4:30 P.M. – 6:00 P.M.  
XYZ Meeting Room, XYZ District Office

April 16, 2009 Coordinators' Meeting.....4:30 P.M. – 6:00 P.M.  
XYZ Meeting Room, XYZ District Office

### **XYZ District/Regional/State Competition**

**Date:** TBA **Location:** TBA

**Essay Date:** TBA

**Registration Paperwork Due Date:** TBA

**Written Reports and Drawings Due Date:** TBA

*Rocket Technical Report, Technical Drawing and Patch Design*

*Mousetrap Car Technical Report and Technical Drawing*

[Some districts hold teacher competition training workshops, "SECME Saturdays," on an annual basis. For example:]

### **XYZ SECME Saturday Competition Training Workshop Dates**

**SECME Engineering Design: Mousetrap Car**

Date: September 27

Time: 8:00 – 1:00

Location: TBA

### **Brain Bowl – Essay and Banner**

Date: October 4

Time: 8:00 – 1:00

Location: TBA

**Bridge Building** [although not a SECME National Competition, local competitions can be included in SECME program]

Date: October 18

Time: 8:00 – 1:00

Location: Northboro Elementary School

### **SECME Water Rocket**

Date: November 8, 2008

Time: 8:00 – 1:00

Location: Don Estridge Middle School

### **SECME Internet Science Technology Fair (ISTF)**

Date: December 13

Time: 8:30 – 2:30

Location: Online; See memo for call in number (must have phone and Internet connection to participate)

## **Sample National Competition QUICK REFERENCE GUIDE**

\*See *SECME National Student Competition Guidelines* posted on SECME homepage for complete information.

**National Competition Guidelines are updated annually.**

<b>COMPETITION NAME</b>	<b>GRADE LEVEL</b>	<b>CONTEST TYPE</b>	<b>JUDGING PROCEDURES</b>	<b>NATIONAL COMPETITION</b>
Essay	Elementary Middle High	Individual	Essays will be evaluated by a panel of judges based on criteria listed on evaluation form	School winning Essays are sent to National Office for judging; National notifies schools of winning essays
Mousetrap Car	Elementary* Middle High	Team of 3 students	Winner based on the car that travels the greatest distance through the target zone. See formula in guidelines. Score of design run will be added to scores from the technical report and drawing for middle and high schools	MS and HS 1 <sup>st</sup> Place Teams compete at SECME National Student Competition Finals
Internet Science Technology Fair	Elementary Middle High	Team of 3+ students	Winner based on SECME/ISTF criteria	ISTF notifies National Office of winning teams; National notifies schools of winning teams
eCYBERMISSION (eCM)	Grades 6-9	Team of 3+ students	Winner based on SECME/eCM criteria	eCM notifies the National Office and schools of winning teams
Water Rocket	Elementary Middle High	Team of 3 students	Winner based on the rocket that has the best hang time. The launch score is added to the score from the patch for elementary schools. The launch score is added to the scores from the technical report, technical drawing, and patch for middle and high schools	Region/State scores sent to National Office to compile scores and determine National Winning Teams; National notifies schools of winning teams
VEX Robotics* Region Competitions may use a different robotics format -see Region host for Robotics details	Elementary* Middle High	Team of 3 students	Winner based on SECME/VEX Robotics criteria	HS 1 <sup>st</sup> Place Teams compete at SECME National Student Competition Finals

\* Elementary teams do not travel to Nationals.

### **ADDENDUM: SAMPLE FORMS**

The following are samples of various forms you may want to include in your program for local use and copies of forms used by SECME National.

#### **SAMPLE 1**

SECME National does not require student membership application; however, you may find one helpful for your local program. This form would be for your records only.

#### **SECME Elementary School Membership Application**

Year \_\_\_\_\_

Last name \_\_\_\_\_ First name \_\_\_\_\_

Home address \_\_\_\_\_

City and zip code \_\_\_\_\_

Home phone number \_\_\_\_\_

Emergency contact/phone number \_\_\_\_\_

Grade level/Age \_\_\_\_\_

Ethnic background/Gender (e.g. W/F) \_\_\_\_\_

Teacher Name/Room # \_\_\_\_\_

#### **STUDENTS: Please Read and Sign**

As a SECME member, I pledge to obey the rules of SECME, listen to my SECME Coordinator and all chaperones, and follow the conduct code of my school.

Student signature \_\_\_\_\_ Date \_\_\_\_\_

#### **PARENTS: Please Read, Answer, and Sign**

Will your child be able to attend competitions on Saturdays? \_\_\_\_\_

Will you be able to assist as a chaperone on occasion? \_\_\_\_\_

Will your child be able to stay after school to prepare for competition on a day other than the regular SECME club-meeting day? \_\_\_\_\_

Will you accept the liability for any injury to your child that might occur while he/she is working on a SECME project or participating in a SECME competition? \_\_\_\_\_

Parent signature \_\_\_\_\_

Date \_\_\_\_\_



## SAMPLE 2

SECME National does not require student membership application; however, you may find one helpful for your local program. This form would be for your records only.

### SECME Middle and High School Membership Application Year\_\_\_\_\_

Last name\_\_\_\_\_ First name\_\_\_\_\_ MI\_\_\_\_\_

Home address\_\_\_\_\_

City\_\_\_\_\_ State\_\_\_\_\_ Zip code\_\_\_\_\_

Student number\_\_\_\_\_ School Coordinator's Name\_\_\_\_\_

Birth date \_\_\_\_\_ Grade level\_\_\_\_\_

Home phone (    ) \_\_\_\_\_ Gender\_\_\_\_\_ Ethnic background\_\_\_\_\_

Home Room Teacher Name\_\_\_\_\_ Years of SECME experience \_\_\_\_\_

Previous SECME competition experience\_\_\_\_\_

Current math course\_\_\_\_\_ Current science course\_\_\_\_\_

Current computer course\_\_\_\_\_

Current course schedule:

Period/ Block 1\_\_\_\_\_ Room#\_\_\_\_\_ Teacher\_\_\_\_\_

Period/ Block 2\_\_\_\_\_ Room#\_\_\_\_\_ Teacher\_\_\_\_\_

Period/ Block 3\_\_\_\_\_ Room#\_\_\_\_\_ Teacher\_\_\_\_\_

Period/ Block 4\_\_\_\_\_ Room#\_\_\_\_\_ Teacher\_\_\_\_\_

Period/ Block 5\_\_\_\_\_ Room#\_\_\_\_\_ Teacher\_\_\_\_\_

Period/ Block 6\_\_\_\_\_ Room#\_\_\_\_\_ Teacher\_\_\_\_\_

Period/ Block 7\_\_\_\_\_ Room#\_\_\_\_\_ Teacher\_\_\_\_\_

Period/ Block 8\_\_\_\_\_ Room#\_\_\_\_\_ Teacher\_\_\_\_\_

Student signature\_\_\_\_\_ Date\_\_\_\_\_

Parent signature\_\_\_\_\_ Date\_\_\_\_\_

### SAMPLE 3

SECME National does not require student membership application; however, you may find one helpful for your local program. This form would be for your records only.

#### SECME Parent Consent Form

Year \_\_\_\_\_

Student's Name \_\_\_\_\_  
First Last MI

Parent/Guardian Name \_\_\_\_\_  
First Last

Student Address \_\_\_\_\_  
Street Address Apt  
\_\_\_\_\_  
City Zip

Student Home Phone Number \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Parent/Guardian Work Phone \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Parent/Guardian Cell Phone \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Emergency Phone Number \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Student's Grade and Teacher's Name \_\_\_\_\_

Student's Date of Birth \_\_\_\_\_

\_\_\_\_\_ Please consider my child for the SECME Program

\_\_\_\_\_  
Parent/Guardian Signature Date