

# Computer Club Coaching Tips

Coming up with fun and educational activities that engage students week after week isn't so easy. Computer Challenge learned a lot about what works and what doesn't the hard way - by trial and error - while supporting 20 computer clubs in Michigan since the year 2000. Here's the formula that works for us. You can find out more at [www.techclubs.org](http://www.techclubs.org).

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## Key Elements

These have been the key elements of success in our computer club programs.

## Activities

We settled on four [activities](#) that offer rich opportunities for student projects: Lego Robots, Flash Animation, Web Creations, and Digital Video. You'll find support materials on [www.techclubs.org](http://www.techclubs.org) for each activity. We suggest that new clubs pick one activity to start with. Established clubs often work with two or more activities at once as expertise builds up among the club members.

Ideally over the course of one semester a student will learn a new technology, create a project, attend an event or competition, and earn a Challenge Award in a chosen activity.

When starting a new club, get together with a few interested students and select the activity for the first semester. Members are then recruited based on this activity. It is more effective to say "come join our tech club and work with Lego robots" than "come join our tech club and we'll talk about what to do this semester." Once the club is running, the club as a whole can pick the activities for future semesters.

## Competitions

Near the end of each semester we hold two competitions. Robot Challenge is a Lego robot competition. MediaFest is a new media movie festival for Flash Animation, Web Creations, and Digital Video. You can see student projects submitted to these events on our [Showcase](#). Rules for these competitions may be found under the [Lego Robots](#) and [Flash Animation](#) activities.

The competition is the culminating event of the semester. It's motivation for students to work hard on their projects and finish them. Students say the excitement of showing their work and meeting students from other schools is what makes their clubs fun.

The events are held in school auditoriums or gymnasiums. Participating schools donate the space and pay the janitor, so there is no room rental cost. We rent a popcorn machine and provide free popcorn and soda. We borrow computer projection and sound equipment from the school. The total cost is about \$200 for the popcorn machine, drinks, and awards.

Students, parents, siblings, and teachers are all invited. Typically 50-100 people come from 4-6 schools per event. The events usually run 1:00-4:00PM on a Saturday afternoon. Everyone seems to have a lot of fun.

We give out trophies or ribbons to the 1st, 2nd, and 3rd place winners in each category, and participation ribbons to all. The trophies often end up in a school display case.

## Challenge Awards

Challenge Awards are custom medals available to students for completing a set of requirements in an activity area. The medal is cast metal about 1-1/2 inches square and hangs from a blue ribbon with a pin.

There is a Challenge Award for each activity. In general the requirements are to demonstrate a basic knowledge of the technology, complete a project, attend a competition, and meet a computer industry professional for a bit of career exploration. The specific requirements are



found under each activity, for example [Web Animation](#).

We have found that many students enjoy earning these awards. The requirements form a checklist that helps ensure students are receiving a complete introduction to the activity. The medals can also act as motivation for students to complete projects and attend competitions. Challenge Awards are usually presented to students during the awards ceremony at the end of a competition.

If you would like to use these medals in your club, the coach can maintain a checklist with student names and requirements completed. When students complete a requirement they show their coach and the requirement is checked off. The coach approves the completion of all requirements and orders the medal.

### **Ordering Instructions**

Please visit [www.techclubs.org](http://www.techclubs.org) and click Coaching > Key Elements > Challenge Awards for ordering information.

### **Leagues**

computer club league is a group of nearby computer clubs that gets together several times a year for a friendly competition. Our idea of a league is a group of say 5-20 clubs within easy driving distance of each other. The Computer Challenge league in southeastern Michigan has been our learning ground for how to make this work. It's more like a city softball league than major league baseball. While there are national competitions in fields such as robotics, they are oriented toward one annual competition in a specific technology rather than clubs that meet throughout the school year to explore a variety of interests.



Clubs in a league take turns hosting the competitions on a rotating basis. Participating in a league helps your competitions reach critical mass, motivates students to do their best, and spreads the work around of running the competitions while keeping costs low. Our southeastern Michigan league has clubs interested in robotics, new media, and both, so we run a Robot Challenge and MediaFest competition at the end of each semester.

One of the purposes of this web site is to help local computer club leagues to form. Look on the Clubs page for clubs in your area. List your club there so other clubs can find you, and list your events on our Events page. Contact neighboring schools and try to get a league started. I think you'll find it's both fun and worthwhile!

## Semester Outline

<b>Before you start</b>	Review materials on <a href="http://www.techclubs.org">www.techclubs.org</a> Pick a semester <b>activity</b> <b>Pick a meeting place and time</b> <b>Attend coach training</b> <b>Buy equipment, install software</b> Review <b>club success factors</b>
<b>Month 1</b>	<b>Recruit students</b> <b>Participation forms</b> <b>First club meeting</b> Explain program to students Highlight the end-of-semester <b>competition</b> Start projects and learning
<b>Month 2</b>	Pick a club name Design and order <b>T shirts</b> <b>Make a club web site</b> Record progress towards <b>Challenge Awards</b> Continue projects and learning
<b>Month 3</b>	Arrange a <b>career exploration</b> experience Record progress towards <b>Challenge Awards</b> Continue projects and learning
<b>Month 4</b>	Complete and order <b>Challenge Awards</b> Complete projects
<b>Month 5</b>	Attend <b>competition</b> Give out <b>Challenge Awards</b> at event

Topics in bold are described in the sections of this document.

### Meeting Place and Time

We recommend that clubs meet at least two hours a week. It's hard to complete a project with less time than that. Most clubs meet once a week for two hours, others meet twice a week for 1-2 hours each meeting. Most of our clubs have met in the afternoon after school gets out.

The ideal meeting place has about 15 computers and some table space. A school media center or library is often a great place to meet. A computer lab can also be good, especially if there is some open space and tables.

For the Lego Robots activity each team of 2-3 students needs about 5 feet of table space to build the robot, plus at least one computer for each team for programming. For Animation and Web Creations you need one computer for each student. For Digital Video you need at least one computer for each team of 2-10 students.

Make sure your computers are up to the task. Very old or partially broken computers frustrate students instead of encouraging learning. The different activities have varying system requirements, check the [Activities](#) pages for specifics. If in doubt install the software on one computer and test to see that it runs adequately. If not, find a better meeting place or newer computers.

## **Attend Coach Training**

A training day is a great way to learn a new activity, meet other coaches, and learn valuable tips on coaching a successful club. Check our [Events page](#) for training opportunities in your area and look for training available from other organizations.

A Computer Challenge training day follows the same outline as a semester of club meetings. The training is for a selected theme, such as Lego robots. We explore the technology through a series of hands-on challenges and hold a mini-competition at the end. We also offer coaching tips. Ten to twenty people is a good size for a training day, just like a club meeting.

We like to conduct training for coaches and two or three student gurus from each club. These students will serve as your technical experts during club meetings and other students when needed. Acknowledge their contribution with a little special recognition and treatment.

## **Software and Equipment**

### **Ask the Network Administrator**

One of your key allies is the network administrator for your building. Bring the network administrator into the loop when you first begin planning your computer club. Ask about any restrictions or policies on computer usage. Tell them what software product and version you are planning to use. Verify that your school or organization will allow this software to be installed on the computers in your meeting place and that your computers meet the system requirements for this software.

### **Buy Software and Equipment**

It's important to have the software and equipment you need for your club activity ready to go before the first club meeting. When students join a computer club they want to start working on their projects right away. One or two meetings with nothing to do is a sure way to lose interest and members. Our suggested equipment list may be found under each [Activity](#).

### **Install Software**

Usually the network administrator will want to install the software themselves. In any case it is crucial to obtain this person's permission before installing software on any school computer. Once installed be sure to test that it runs correctly and resolve any problems before the first meeting.

### **Storing Student Files**

Students need a place to store their computer files between club meetings. Ideally each student will have personal file space on a file server accessible to all the club computers. This will prevent the files from being deleted by other students between club meetings and allow the club members to use the computers interchangeably. If individual file space isn't practical perhaps a directory on a file server space can be shared by the whole club. Ask your network administrator what is possible.

If file server space is unavailable, ask if files can be protected on individual computers with a separate login. The last resort is storing files on individual computers in publicly accessible locations.

## **Success Factors**

What makes a successful computer club? By "success" we mean that students are learning, having fun, are engaged and challenged. There is a certain energy and enthusiasm in a successful club,

much like a successful sports team. It's a place students want to be, an activity everyone feels is worthwhile.

How do you create a successful club? Here are the factors we've found that lead to success.

**Club size** - One of the primary reasons students participate in after-school activities is to spend time with their friends. If the club is too small there aren't enough people there to make it fun socially, so some students drop out and you can get into a downward spiral. On the other hand if there is a good sized group your computer club can become the place to be, so more students join. The magic number is somewhere around 10. Clubs with less than 10 members tend to shrink, clubs with more than 10 members tend to grow.

A club can also be too big. You want to make sure there are enough computers and other equipment (like robot kits) so that every student can keep busy. If the club the coach may be stretched too thin and unable to help new students, so they get frustrated and quit. A good upper bound is 20 or 25 students, if you have enough computers and equipment for that many. It's better to have a full club with a waiting list than a huge club with frustrated students. Success factor: 10-25 students attend club meetings.

**Role of the coach** - A computer club coach is much like a sports team coach. The coach is there to handle logistics and encourage students to do their best. The steps listed on our [Semester Outline](#) give a good idea of the coach's responsibilities.

The most important job of the coach is cheerleader - getting students excited about the projects, the competition, and the awards, and encouraging full participation in all club activities. Touch base with each student individually on a regular basis to ensure they are learning, having fun, and are not stuck. If they are stuck point them to the resources they need, such as the tutorials on this web site or one of your student gurus.

The coach should also keep an eye on the calendar and guide students to completing their projects in time for the competition. Pacing is not a strength for most young people - they tend to leave things to the last minute. An adult perspective is a big help here.

The coach need not be a technical expert on the activities, in fact some of our best coaches have not been technical types. The real repository of expertise in your club are your student gurus, those students who have built up knowledge through hands on experience. Ask them to help teach newer students on a one-on-one basis and praise them for helping others. Success factor: Coach is an effective organizer and cheerleader.

**Competitions** - "The competitions are what make computer club fun!" one student recently told me. A competition at the end of each semester forms the focal point for club activities, a reason for students to try hard and finish their projects, and the highlight of the semester. Let students know that all club members are expected to complete a project and attend the competition. Talk it up throughout the semester. Arrange transportation for students and attend yourself. Success factor: At least two-thirds of club members attend each competition.

**Challenge Awards** - Students appreciate praise and recognition for their hard work. We have found the [Challenge Award](#) system is an effective way to motivate students and ensure that each student is receiving the full benefits of the program. Success factor: at least two-thirds of club members receive a Challenge Award each year.

## Recruit Students

Keep in mind that Computer Challenge is not only for the best and brightest. Often students with academic or behavior problems in school will shine in Computer Challenge due to the added

attention and hands-on activities. We are especially interested in serving students with reduced opportunities.

Promotion is a crucial step! Here are some proven methods for recruiting students.

- **Personal invitations from the coach.** This is the most effective method. Give each prospect a participation form.
- **Invitations from teachers.** Explain the program to teachers, get them excited, invite them to visit [www.techclubs.org](http://www.techclubs.org). Ask teachers to announce the program and hand out participation forms.
- **Posters.** Put up posters around your school or meeting place or wherever students will see them. Include the meeting place and time, semester theme, where to get a participation form, and who to contact for more information. Some sample posters are included below. Edit them to add the correct information for your club or design your own. Be sure to recognize your club sponsors and include the Computer Challenge name, logo and Web site. Copying posters onto colored paper adds interest.

See sample posters at the end of this section.

## Participation Forms

Give each new or prospective club member a participation form and have it signed by a parent or guardian. The participation form is a good recruiting tool, it provides the parents with information about the club, it obtains permission for their children to participate, and it serves as a media release form should you want to use the student's picture on a Web page or other media.

To create a participation form for your club, start with one of the examples in the Appendix and change the information section to match your club. Collect the permission sections from students and keep them in a file.

See sample participation form at the end of this section.

## Your First Club Meeting

The first club meeting is a time to build camaraderie, generate excitement, and share information. Begin by having everyone sit in a circle. Go around the circle and ask each student to say his or her name, what they like to do with computers, and one hobby or interest other than computers.

Then explain a little about Computer Challenge and what they will be doing this semester. Tell them that Computer Challenge is a network of after school computer clubs for middle and high school students. Each semester the club will pick a theme: robots, animation, Web, or video. Next semester they may continue with the same theme or pick a new theme. Over the course of the semester students will work with this technology and make projects. Our motto is "Create something!". At the end of the semester we will travel to a Computer Challenge festival or event and enter our projects into the competition.

Then give a quick intro to the theme for this semester. For example, if the theme is Lego Robots, show them a robot or the Mindstorms box and tell them briefly how they work and why this is cool. You will have learned this at coach training.

Next tell them about the Challenge Award system. Go over the requirements for the Challenge Award for this semester.

Set the expectations - students are expected to attend regularly, create a project, complete a Challenge Award, and attend the end-of-semester event. The end-of-semester event is not just for students who have nothing else to do that day and feel like coming - it is a requirement of the program. Computer game playing and Internet surfing should be limited to not more than 1/4 of the meeting or banned entirely.

Now tell them about the [techclubs.org](http://techclubs.org) web site. Give them a tour of the features and information. Tell them to use this site for information on the technologies and events. Also explain that getting information from Web sites is a crucial skill.

Give participation forms to all students and require that they be returned signed by a parent.

Hopefully all this talk will last less than 30 minutes. Now jump into the first project! Using an on-line tutorial in [techclubs.org](http://techclubs.org) as a guide, explain how to get started with the chosen theme. Then turn them loose to work on it. Generally 75% of a meeting should be students working on their projects, with 25% or less being group discussions.

Look through the Challenge Award requirements for the chosen activity. Some will be completed automatically, such as build a robot as part of a team. Check them off as soon as completed, and point out the completion to the student. Other requirements require group discussions or a career exploration visit. Plan these into your club meetings.

## Order T Shirts

T shirts help build camaraderie and team spirit, and they let the world know who you are! It's especially fun to wear your club T shirts to competitions.

We've used an indirect printing process which allows for full color image printing, but requires a white or light gray shirt. The front of the shirt shows the club name over the pocket area. The back of the shirt shows a full size (up to 8.5 x 11 inch) full color image of your choosing. The back will also recognize the club sponsor if you have one. All T shirts from the same club have the same image on the back.



We've order our T shirts through Ascott Corporation, Ann Arbor, MI, (734) 663-2023. Orders can be placed by email with the following information:

1. An image for the front including the club name. The club name should include the name of your school or community center plus one or two more words. Some recent examples are the Harriet Center Streetstars, the Whitmore Lake Tech Club, and the Lincoln High School Computer Club. Keep it short or the words will be small.

2. An image for the back. You can create this image in Word, Flash, Publisher, or any program that can output a JPG, BMP, or GIF image. The image can be full color. The Word Art feature in Microsoft Word (Insert > Picture > Word Art) is a great way to make cool looking letters. You can also use clip art off the Web, a digital photo, or draw your own.

3. A list of T shirt sizes and quantities. For example, 2-S, 5-M, 5-L, 4-XL, 1-XXL

4. Shirt color (white or light gray).

Involve your club members in a brainstorming session to pick a club name and picture idea, then ask for one or two volunteers to create the picture for the back. Order your shirts from your printer at least 2-3 weeks before you need them.

### **Make a Club Web Site**

Note: A lot more information on making web sites the easy way can be found on [www.techclubs.org](http://www.techclubs.org). This isn't that hard! No knowledge of HTML or programming is required. A couple of motivated students can do this and learn a lot if directed to the explanations on the web site.

### **The Project**

Make a web site to tell the world about your club!

You can:

- Put up a description of what your club is, where you're from and when you meet, so that new people can join you.
- Use digital photos of your members and activities (but be sure not to give student names!).
- If you've done digital projects, like Flash movies or other Web sites, link to them, too.
- Include links to your school web site, the Computer Challenge site, and other sites that you like to hang out at.

### **Check It Out**

Take a look at the [Lincoln High School Computer Club](http://www.lincolnhighschool.computerclub.org) web site.

### **The Reason**

- Show your friends and family what you're doing!
- Attract more members (especially if the school's page links to yours).
- Learn how to make cool web pages.
- Have fun with digital photography and images.

## Web Safety

To prevent Internet creeps from finding you, don't post student personal information on Web sites including last names, email, home addresses, or phone numbers. Get a copy of your school Internet policy and make sure you follow it.

## Getting Started

You can get a club Web site up in an hour or two! Use these simple steps:

1. Read about [web sites the easy way](#).
2. Pick a club name, if you haven't already done so. Use it as the title of your site.
3. Find a picture or graphics to put on your page for interest. Some possibilities: free clip art from the Web (See [Lissa's site](#)), artwork by a club member, a digital photo of club members in action, or a scanned photograph.
4. Add essential club information:
  - o When and where you meet
  - o Your coach's name and contact information
  - o How to join the club
  - o What you are doing in the club this semester
5. Connect to Computer Challenge
  - o You are welcome to [add the Computer Challenge logo to your site](#).
  - o Add a link to [www.techclubs.org](http://www.techclubs.org)
6. Post your page following the instructions in Web sites the easy way. Put it all on one page for starters. You are on the Web!
7. Let Computer Challenge know your site is up and we'll link to it from [techclubs.org](http://techclubs.org). Send email to David Coupland at [david@techclubs.org](mailto:david@techclubs.org).

Be sure anything posted is appropriate! If in doubt, ask your coach.

## Making It Better

### Working together

- Have a club brainstorming session on the content and layout
- Appoint a club Webmaster or team.
- If a team, assign jobs such as graphics & layout, writers, navigation.

### More content

- Add pictures of your club in action using a digital camera. Or use a scanner to scan photographs.

- Add links to club creations, like Flash movies or Web creations.
- Add more pages to document activities, events, and projects, like Robot Challenge and MediaFest.
- Add links to your favorite Web sites (appropriate).
- Create a club logo (optional).
- Be sure anything posted is appropriate! If in doubt, ask your coach.

## Career Exploration

One of the goals of Computer Challenge is to give students an idea of what happens in the professional world of the computing. A career exploration experience should be a part of your program each semester and is a requirement for each Challenge Award.

How do you find an computer professional that will provide a career exploration experience for your club? First put feelers out into your local community, especially parents. Ask your students if any of their parents or relatives work with computer engineering or information technology, get a name and phone number, and give a call. Or an acquaintance of yours or a parent may know someone who works in a computer field. Computer staffers in your school or school district aren't necessarily the best choice since students already know what goes on in schools. When you speak to a possible visitor, ask them if they like their job or not. Nothing is more disappointing to students than listening to someone complain about their work.

A great way to expose students to the real world of information technology is to take a field trip to a business. Your computer professional may be able to arrange this for you.

Or your computer professional can visit your club. In this case, ask him or her to prepare a 30 minute presentation about a particular success story in his/her career. It could be a product development story, a major obstacle overcome or problem solved, something he or she created, satisfying an important customer, capturing a new account, a competitive win, etc. Not a raise or promotion. Ideally the success story will involve teamwork. Props, pictures, or sample products add interest.

Either way, ask your computer professional to tell the name of his/her position, tools and technologies used, personal product or service, and education requirements or previous experience needed for this job. This information satisfies the career exploration requirement for each Challenge Award.

At the end, have students fill out the form below. This helps them consolidate and reflect on what they learned. Keep the filled out forms in your club file for a semester or so.

See the Thinking About Careers form at the end of this section.

# Join the Detroit Lions Tech Club!

This semester:



**Build robots, compete in Robot Sumo**



There is no charge to participate.  
For more information come to a club  
meeting, or ask for a participation  
form the office.

**Mondays**

**3:00 – 4:45pm**

beginning Dec 2

**Media Center**

**Richard Jones, Coach  
555-1212**

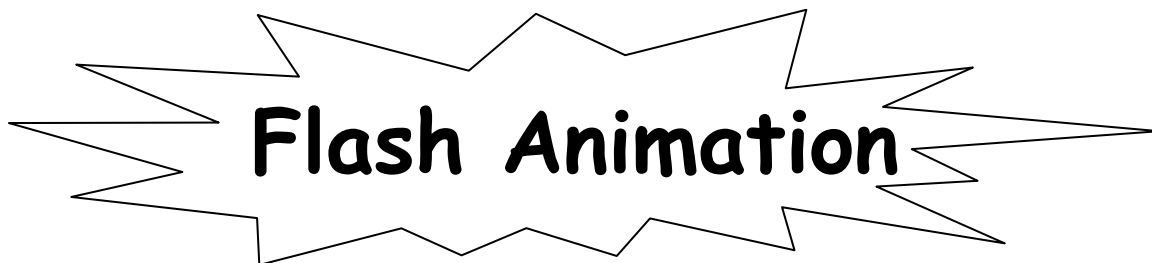
Sponsored by the **Ford Motor Company Fund**

Program by **Computer Challenge**

[www.techclubs.org](http://www.techclubs.org)

# Join the Slauson Computer Club!

This semester:



**Make animated movies on a computer**



There is no charge to participate.  
For more information, come to a club  
meeting, or ask for a participation  
form at your house office.

**Mondays**

**3:00 – 5:00pm**

beginning Dec 2

**Room 121**

Mary Jones, Coach  
555-1212

Sponsored by the **SBC Ameritech Foundation** and the **Slauson PTO**

Program by **Computer Challenge**

[www.computerchallenge.org](http://www.computerchallenge.org)

# Join the Detroit Lions Tech Club!

## Make Lego Mindstorms Robots Compete in a Robot Sumo Contest!

**Who:** All Detroit Lions Academy students  
**When:** Mondays, 3:00 – 4:45pm, beginning December 2  
**Where:** Media Center



This semester we will be making robot cars with Lego Mindstorms kits. We'll enter the robots into Robot Challenge, a robot Sumo competition where robots try to push each other out of an official Japanese Robot Sumo ring. Robot Challenge will be held on Saturday January 11, 1:00 – 4:00pm, in Ypsilanti.

**There is no charge to participate in the club or Robot Challenge.** Have your parent fill out the participation form below and bring it to the next meeting. For more information contact Coach Richard Jones, richardj@aol.com, 555-1212.

Sponsored by the **Ford Motor Company.**

Program by **Computer Challenge, [www.computerchallenge.org](http://www.computerchallenge.org).**

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I give my permission for my son or daughter to participate in the Computer Challenge computer club program during the 2002-2003 school year. I understand that students who do not attend regularly will be ineligible to participate in competitions, and that coaches are not responsible for ensuring that students arrive at the club meetings. My child's picture may be used on club, school, or Computer Challenge Web sites, printed materials, newspaper articles, or videos. Children's names will not be used on public Web sites to protect their safety.

student name: \_\_\_\_\_ grade: \_\_\_\_\_

signature of parent or guardian: \_\_\_\_\_

printed name of parent or guardian: \_\_\_\_\_

phone: \_\_\_\_\_

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# Thinking About Careers

Students, after a professional visit or workplace tour, answer these questions to help you think about this career and your interest in it. Turn the answers in to your coach when done.

Student's name: \_\_\_\_\_

Date: \_\_\_\_\_

Visitor's name: \_\_\_\_\_

Career name: \_\_\_\_\_

Education required: \_\_\_\_\_

Personal product or service: \_\_\_\_\_

Technologies: \_\_\_\_\_

List things about this career that interest you:

List things about this career that don't interest you:

List talents of yours that you could apply to this career:

Overall match to your interest and talents:  poor match  not sure  good match