CryptoClub Overview and Workshop Details

**What is CryptoClub?** CryptoClub is a 16 – 20 hour afterschool curriculum developed to teach cryptography and mathematics to students in grades 6 – 8. Cryptography, the science of secret messages, is an intriguing STEM topic and an important application of mathematics. The CryptoClub curriculum has been developed and tested at the University of Illinois at Chicago with support from the National Science Foundation.

**What happens in a CryptoClub?** During a typical session, students are introduced to a cipher (method of encrypting), and then practice it through games and activities that involve sending and receiving secret messages. Some activities involve moving around, for example, students might engage in a treasure hunt, following a trail of encrypted clues around the school, or in a relay race with teams running back and forth, competing to be the first to gather and decrypt the parts of a secret message. Other activities involve sitting more quietly and thinking deeply about patterns that might help break a code. The CryptoClub website provides additional games and challenges for continued exploration.

**What is the academic content in CryptoClub?** In addition to cryptography, CryptoClub applies mathematics topics from the middle-school curriculum, such as decimals and percents, division with remainder, common factors, and negative numbers. It also applies pre-algebra skills such as pattern recognition and problem solving. Furthermore, CryptoClub offers many opportunities to help students develop the mathematical habits listed in the Standards for Mathematical Practice from the *Common Core State Standards*.

**What materials are needed to lead a CryptoClub program?** Students should each have their own *CryptoClub Cipher Handbook*. The cost of the book is pending, but is expected be about $15. Access to the Internet is recommended. We will provide leader materials to each workshop participant.

**Who should attend a workshop?** Teachers and afterschool leaders who want to use the CryptoClub curriculum to teach cryptography and mathematics in afterschool programs are encouraged to attend. Leaders need not be mathematics teachers—just enthusiastic about math. No prior cryptography experience is required. Registration priority is given to applicants who have their administrator’s approval to conduct a CryptoClub program during the 2015-2016 school year.

**What is the cost?** There is a $50 registration fee. Participants are responsible for paying their own travel and housing expenses, and for food other than that provided at the workshop. The workshop is partially supported by a grant from the National Science Foundation.
**Continuing Education Credits**
Approximately 21 CPDUs are available for Illinois teachers.

**Workshop Dates and Schedule:** June 25-27, 2015
Participants are expected to attend the full three days of the workshop.
The workshop times are as follows:
- Thurs: 8:00 AM – 5:00 PM
- Fri: 8:00 AM – 5:00 PM
- Sat: 8:00 AM – 2:00 PM

Note: To allow time to travel to the airport, departing flights should be scheduled to leave after 5 p.m.

**Meals**
The workshop will provide continental breakfast and lunch each day. Other meals will be the participants’ responsibility.

**Travel**
The workshop will be held on the East Campus of the University of Illinois at Chicago. The campus is easily accessible by public transportation and by car from O'Hare and Midway airports, and the Amtrak and Metra train stations. For more information about visiting UIC, please see [http://www.uic.edu/uic/about/visit/directions.shtml](http://www.uic.edu/uic/about/visit/directions.shtml)

**Lodging Options for out-of-town participants**
The following are all about a one mile walk, bus or taxi ride from workshop location:
- Crowne Plaza Chicago Metro at 733 W. Madison St.
  [http://www.thechicagometro.com](http://www.thechicagometro.com)
- Holiday Inn & Suites Chicago-Downtown 506 W. Harrison St.
- Chicago Marriott at Medical District/UIC 625 S. Ashland Ave.
Questions

For information about the workshop contact Debra Levine at the address below.

For information about the CryptoClub Project contact:

Janet Beissinger
University of Illinois
Email: beissing@uic.edu
Phone: 312-413-2168

or

Bonnie Saunders
University of Illinois
Email: saunders@uic.edu
Phone: 312-413-1417

Application

Submit application to:

Debra Levine
Math Department/LSRI
University of Illinois
851 S. Morgan St. (M/C 249)
Chicago, IL 60607
Email: dlevin6@uic.edu
Phone: 312-355-1183
Fax: 312-996-1491

Priority will be given to applications from those that have administrator approval to lead a CryptoClub program in 2015-2016.
Cryptoclub Leader-Training Workshop Application
June 25-27, 2015

Part I

1. Personal Information

Name: ____________________________ e-mail: ____________________________

Home Address: __________________________________________________________

street city state zip

Home /cell phone: ____________________________ Work Phone: ____________________________

2. Professional Information

School/Organization: ________________________________________________________

Address: ________________________________________________________________

street city state zip

Title/primary role in the school/organization: ____________________________

3. Why are you interested in attending a CryptoClub leader-training workshop?

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4. Tell us about your teaching experience. What grade levels? How long? What subjects or areas of interest? Do you have experience teaching in afterschool/out-of-school settings?

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5. How did you learn about the CryptoClub leader-training workshops?

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I have read the CryptoClub Overview and Workshop Details and understand the following:

- Participants are expected to attend the full three days of the workshop.

- Participants are responsible for paying their own travel and housing expenses, and for food other than that provided at the workshop.

Signature______________________________________ Date ______________________
Part II

Complete this section if your organization plans to implement a CryptoClub Program during the school year 2015-2016.

Program site: ________________________________________________________________

Address: ____________________________________________________________

street city state zip

Organization responsible for programming (if different from site): ________________________________

Name(s) of CryptoClub program leader(s): _____________________________________________

Type of site: ☐ Public school (District: ____________) ☐ Private school

☐ Community Based Organization ☐ Other: ________________________________

Anticipated CryptoClub schedule: Start date: _______________ End date: _______________

No. of students expected to attend CryptoClub: _______ Grade Levels: ☐ 6 ☐ 7 ☐ 8 ☐ Other: ______

Please describe how your CryptoClub program will fit into existing afterschool/extracurricular programs at your site.

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Site Administrator Information and Approval

Registration priority will be given to applicants who have their administrator’s approval to conduct a CryptoClub program during the 2015-2016 school year.

I give permission for ________________________________ to lead/organize a 16-20 session

name of workshop applicant

CryptoClub program during 2015-2016. I understand that books are recommended for each student in

the club and that Internet access is recommended for some of the sessions. I also understand that the

cost of the CryptoClub student book is pending, but is expected to be about $15.

Signature: ________________________________ Date: ________________________________

Name: ________________________________ Title: ________________________________

e-mail: ________________________________