



Organize a Math and Science Club

Overview

Math and Science Clubs are a great way to spark a child's interest in learning. They give students a chance to question how or why things work and work toward solutions (problem-solving). A Math and Science Club can give students a safe environment to learn and interact with others with similar interests. They can also provide a safe place for students to explore and discover, especially for those who may not have strong support at home. You do not need to be a teacher or a scientist to start a club; just bring your enthusiasm to inspire young minds. Your club can also prepare students for science fairs/ projects, math tests, and material they will learn in the future. When you start a Math and Science Club, you are helping the community by inspiring young people to learn.

Suggested Age Group(s)

- Adults, teens, and children

Suggested Skill Level

- Moderate

Project Instructions

1. Identify Partners and Leaders
 - Call your friends, family, and coworkers and ask if they would be interested in helping plan and implement such a project. You can also ask schoolteachers and community leaders to lend their support and ideas. These partners may have materials and resources you can use for your club. This could be a great opportunity for a student to take a leadership role.
2. Identify the Need
 - In order to establish goals and create your math and science club, it is important to understand what your community or school needs. Find out if this type of club already exists or if one existed in the past. If one did exist, find out why it ended. If one already exists, find ways to lend your support. If it is not possible to start a math and science club, consider other types of clubs that might benefit the youth in your community. Ideas might include reading, history, technology, geology, or green (conservation) clubs.



3. Set a Location

- Contact your local school and let them know about your idea. Arrange a meeting with the school principal and go over a plan for implementing a math and science club into the school. If the principal is welcoming to your ideas, find out the requirements for starting a school club. Many schools are open to extracurricular activities so the process shouldn't be too hard. If you cannot hold your club at your local school, try contacting a community center.

4. Establish Goals

- It is important to set goals for your math and science club. Establishing goals can help you create a plan for implementing your club. These goals can also help you create an overall message you would like members and potential members to learn. What would you like youth to gain from this math and science club? How will your club benefit the community and youth? How many members would you like to have? Be sure to remind yourself that your math and science club will positively impact young learners, possibly inspiring new mathematicians and scientists! Stay enthusiastic and show genuine excitement for topics and activities.

5. Develop Your Plan

- As you continue to establish your math and science club, ask yourself the following questions in order to create a coherent plan:
 1. Where can we access math and science books?
 2. What resources are available to use? Can the school provide any?
 3. Where can we access materials for science experiments and math demonstrations?
 4. What will a typical meeting look like?
 5. What topics will we explore?
 6. Will we implement technology into the club? (i.e. movies, computers, or music)
 7. Will we play math and sciences games?
 8. Will students keep a log or journal of their work?
 9. Will snacks and refreshments be provided?
 10. Will we take field trips?
- It is important to have access to safety supplies before you start your club. If you plan to allow students to work on science experiments, make sure you provide basic safety materials such as goggles, gloves, aprons, and a first-aid kit.

6. Define a Timeline

- Set a timeline for your math and science club. When will your club begin and end? Will it run during the school year or will it be a summer program? Will the club meet daily, weekly, or monthly? Will the club meet after school, during lunch/recess, or on weekends? It is important to create a calendar in order to establish consistency.



7. Hit the Streets

- Contact your local colleges and universities, places of worship, PTAs, student clubs, associations, and businesses and spread the word about your club. Talk to people in your community and ask them to support the cause. People can provide support by donating books, materials, refreshments, or time. It may be beneficial to invite guest speakers to your meetings. It may be useful to contact a university's math, science, or education departments and ask if an instructor would like to be a guest speaker or if their students would like to volunteer by leading demonstrations or tutoring.

8. Promote!

- Recruit members for your math and science club. You may want to print flyers, publish in the school/library newsletter, send emails, and use social media to mobilize your networks. Use whatever media you can to get the word out and engage people in your effort. You can do this yourself or with the help from partners and leaders you've found in the community. You may also reach out to youth in order to spread the word and provide advice on how to get your club up and running. Youth may know of new ways to recruit club members.

9. Empower Youth Leaders

- Youth voice is a key component in offering a high quality youth project or program. Young people should have an influence on the setting, activities, structures, and policy of the club. Allow students to suggest ideas for the club and lead group work. If your club is open to all ages, allow older students to tutor and guide younger students. Allow youth to initiate projects and programs related to ideas they have. Collect frequent feedback from your members in order for your club to grow and meet everyone's needs and aspirations.

10. Reflect and Recognize

- After your meetings, take a few minutes to reflect on the math and science club and the impact it has on your community. Contemplate ways to continue what works and fix what does not work. Last but not least, don't forget to thank your volunteers, partners, and club members. They deserve it!

Reflection

After your volunteer project, it is important to reflect on the experience and think about the impact of the project on the community as well as what you learned about yourself and others. Here are some suggested activities:

- Tell your family and friends about something you learned and how you will continue to help others.
- Blog, draw a picture, write a poem, submit a letter to the editor
- Write about your experience on your Facebook account, or Twitter feed.



- If you are working with a group of volunteers on this project, lead a group discussion with questions such as:
 - Why did you volunteer?
 - What did you learn about the needs of the youth and schools in your community?
 - What is the one thing that you will remember most about this service activity?
 - How can you continue to make a difference in our community?

Additional Resources

- Michigan Reach Out! How to start a science club:
<http://www.reachoutmichigan.org/scienceclubs/startclub.html>
- Cool Science Club:
http://coolscienceclub.tripod.com/start_a_science_club.html
- Math-Mom:
<http://www.math-mom.com/article/start-a-math-club>
- Science Buddies:
<http://www.sciencebuddies.org>
- VolunteerSpot - A free resource to help schedule and organize volunteer activities
<http://www.volunteerspot.com>



Sample Checklist

Before club members arrive, it is important to establish a space where:

- ✓ Students can access materials
- ✓ Everyone will sit to work
- ✓ Students will put their backpacks and coats
- ✓ Students will be able to wash up if needed
- ✓ Students to access snacks if you decide to provide them

Notes

- ✓ If you have volunteers and youth leaders, ask them to help with set up.
- ✓ It is important to establish how each meeting will run. Will students go directly to materials, or will they go to a place to sit and receive instructions?

Sample Agenda

North View Elementary Math and Science Club

Grades 3-6

The first Monday of every month, 3:30 – 4:30pm

- Meet and Greet (5 minutes) – Students and volunteers arrive, put away backpacks and coats, grab a snack, and meet in the discussion circle.
- Welcome and Introductions (10 minutes) – Introduce yourself, welcome new and old members, and, if necessary, ask for members to introduce themselves.
- Opening Discussion (15 minutes) – Introduce the topic for the day. Read a short book on the topic and pose a question for students to discover an answer. Lead a short demonstration on how the experiment or math equation will work.
- Discovery Time (20 minutes) – Students will break off in pairs or small groups and execute their experiments. Students will record their work and discoveries in their *Discovery Journal*. Students will practice safety and respect for each other and the materials at all times. Students will work to solve the question posed at the beginning of the meeting.
- Closing Discussion and Clean Up (10 minutes) – Bring students back together for a closing discussion. Allow students to share discoveries they made during the experiment. Students can share data and observations they recorded in their *Discovery Journal*. Ask for any final questions and an answer to the question posed at the beginning of the meeting.
- Dismissal - Parents and guardians pick up students.