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MATHEMATICS LABORATORY AND MATHEMATICS CORNER

Learning resources also include mathematics laboratory (math lab) and mathematics corner, which slightly differ in their organization and material possessed. Let us discuss the major differences among them “Mathematics laboratory is a unique room or place, with relevant and up-to-date equipment, known as instructional materials, designed for the teaching and learning of mathematics and other scientific or research work, whereby a trained and professionally qualified person (mathematics teacher) readily interacts with learners on specified set of instructions” (Adenegan,2003). Math lab is a place where learners get opportunity to engage with mathematical objects, experiment mathematical theories, solve mathematical puzzles and problems, play mathematical games, experience hands on training, and so on. The material or equipment that can be found in the mathematics laboratory includes, among others, constructed (wooden/metal/plastic made) mathematical sets, charts and pictures, computer(s), computer software, audio-visual instructional materials such as projector, electronic starboard, radio, television set, tape recorder, video tape, etc, solid shapes (real or model), bulletin board, three-dimensional aids, filmstrips, tape photographs, portable board or whiteboard, abacus, cardboards, tape measure, graphics, workbooks, graphs, flannel boards, flash cards, etc (Adenegan,2003).

Math lab consists of a number of materials and objects. Mathematics corner is a miniature form of math lab. Math lab is highly organised, consists of several objects/materials/instruments and requires specialized skills in developing them, but math corners are simple and contains few mathematical objects and items. You can setup a math corner at the corner of any other lab or on the corner of classrooms. Usually, math corner is a place where learners find the ordinary/common kinds of mathematical items and you can utilize these items during the classroom interaction. In a way, math corners include math related teaching-learning aids. It is to be noted that, the objects found in math labs can also be found in math corners.

- Now let us discuss the importance of math labs and corners. The math labs/corners are important due to the following reasons:
- It helps learners to comprehend mathematical concepts effectively by utilizing concrete objects and experiencing real situations.
- Learners can test and experience the theoretical knowledge and discover different mathematical properties.
- It enhances the interest and motivation of learners to learn mathematics.
- Math labs provide objects and materials, which help learners to relate concepts with their daily life activities and nature.

- Individual learning is promoted while exploiting math labs as learners engage in exploration of mathematical contents in their own way.
- The cognitive development is supported and enhanced as learners exercise both mind and body by engaging in learning activities.
- The teacher can demonstrate learning concepts by connecting with multiple learning resources present in the math labs.
- It helps in the development of skill of enquiry and critical thinking.
- The principle of 'learning by doing' can be practiced by learners.

Now, let us see the objects that are generally found in math labs. It is your obligation as a mathematics teacher to initiate steps to develop math labs in your school. It is not necessary to have many items instead the basic objects must be organised in the lab. While developing math labs, the following objects/materials/equipments can be included in it.

MATHEMATICS CLUB AND FORUM

Similar to math lab/corner, mathematics club and forum is also another important learning resource. NCF (2005) suggested 'mathematisation of learner's thought processes' as one of the major goals of mathematics teaching. How do we develop the skill of mathematisation among learners? You may motivate learners to engage in math clubs and forums. Math clubs/forums are to be viewed from two angles; a learning resource and as a place to engage learners in extracurricular activities. Learning resource in the sense that mathematics teachers can utilize math club/forum to engage their learners to discuss, debate and deliberate on various topics of mathematics. On the other hand, different co-curricular activities such quizzes, study tours etc. can be organised by mathematics clubs/forum.

Math club/forum is a group of individuals getting together to organise events, discuss, debate on various topics pertaining to mathematics. The club arranges various events such as birthdays of mathematicians, math days etc. Also, the clubs and forums are engaged in organising discussions, debates, seminars, study tours, etc. Ultimately, math clubs/forums help learners in developing interest and motivation in mathematics learning. There are different ways of involving learners in learning mathematics; math club/forums play a major role. So as a math teacher it is your duty to initiate processes to develop math clubs/forums. The math club/forums work under the guidance of the math teacher.

Apart from this, math clubs/forums are important because of the following reasons:

- Math clubs/forum help learners to engage in various activities related to mathematics learning.
- Facilitate and arouse interest and motivation in learners to learn mathematics.
- The leisure time can be properly utilized by involving in programmes organised by math clubs/forums.
- Learners are exposed to various activities of math clubs/forums thus help them to test theories learnt in their math classes.

- Provide opportunity to learners to initiate different programmes.
- Help learners to enhance skill of leadership, problem solving, joint responsibility, hard work, etc.
- Math clubs/forums help learners to engage in activities where they can discuss, contest and ponder over various themes of mathematics.

Let us see, how mathematics clubs/forums can be set up? What is the general structure of such clubs? You might have seen various clubs/organisations in your school and nearby areas. Such clubs organise events such as blood donation camps, eye testing, cultural campaigns and so on. In such organisation, we find office bearers and executive committees. In similar fashion, math club/forums are set up in schools. For this, the initiation must come from you as a mathematics teacher. So, it is pertinent to say that, you have a bigger role in creating math clubs/forums.

To set up math club/forum, you can organise a meeting with students. In the meeting, draft constitution of the club may be discussed and further course of action may be initiated. The constitution can be prepared by you in consultation with the head of the institution (Principal/Head Master). The points to be included in constitution include; name of the club, aims and objectives of the club, details of membership, etc. The club/forum should have head of the institution as its patron and a mathematics teacher as convener. The office bearers such as President, Vice-President, General Secretary, Joint Secretary, and treasurer must be selected from the learners. After electing the office bearers, the programmes to be organised may be discussed, and finalised. One point to be noted here is that, it is not necessary to follow the format that we have discussed instead you have full freedom to modify as per your need and situation. The following activities can be undertaken by the math clubs/forums;

- Educational talks, lectures, key note addresses by renowned mathematicians, teachers, math specialists, etc.
- Celebration of birth days of mathematicians and organization of other important mathematical events, math days, etc.
- Discussions and debates on various topics and issues related to mathematics.
- Quiz programmes.
- Conduction of math fairs, math olympiads, exhibitions, etc.
- Exhibition of mathematical models, aids, charts, etc.
- Seminars and workshops.
- Publication of magazines and periodicals on weekly/monthly/yearly basis.