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FRAMEWORK OF SCHOOL STEM CLUB

PROPOSED NAME

The name of this club shall be “PSC (School name) STEM Club”.

TYPES OF SCHOOL STEM CLUB

There are two options for constituting STEM Club at School, these are:

1. School Owned STEM Club

- All expenses including project material, tools and equipment and running cost to be borne by the school.
- Pakistan science club will be responsible to provide the following:
 - Lesson plans.
 - Workshop training to the group leaders.
 - Video conferencing.
 - Risk assessment to the mentor and office bearer students of the school.

2. PSC driven School STEM Club

- All expenses including project material, tools and equipment and running cost to be borne by Pakistan Science Club.
- Pakistan science club will be responsible to provide the following:
 - Lesson plans.
 - Activity material
 - Tools and equipments.
 - Workshop training to the group leaders.
 - Video conferencing.
 - Risk assessment to the mentor.
 - Facilitating school’s Science Club’s activities.
- The facilitators of Pakistan science club will carry out all the activities in school by themselves with the school’s STEM club members and students.

INTRODUCTION

1) Setting up School's STEM Club

a. **What is School STEM Club?**

A school STEM club is an out-of-school-hour or in School-hours science exploration and investigation platform. **Pakistan Science Club** offers children the chance to do science-related activities that extend and enhance the science they experience in the classroom.

b. **The Club Aims**

- Providing a platform for fun learning of scientific concepts by practical experiments related to **National Science Curriculum 2006**.
- To carryout hands-on activities and project making according to the syllabus. In order to develop basic concepts behind scientific phenomenon and practical implementations of this knowledge in everyday life.
- To encourage interest in Science and Technology.
- To provide opportunities and facilities to support scientific interest.
- To encourage a spirit of comradeship.
- To liaise with other organizations who share these aims.
- To search & promote the science talent and bring it to the limelight.

c. **The Benefits of Running a STEM Club**

- Related activities to the national curriculum develop understanding and conceptual learning regarding subjects of Science, Technology, Engineering, Mathematics and their topics.
- Hands-on skills development.
- Enhancement of practical approach and problem solving attitude.
- Team working.
- Leadership skills.
- Presentation skills.
- Confidence building

2) Learning Objectives

This learning journey provides guidance on running and setting up a STEM club. It is created as part of Pakistan Science Club which aims to provide young people with learning opportunities in Science and technology, Engineering & Math's (S.T.E.M.) using classrooms and libraries.

3) What Are We Going To Do?

There are many different things we can do in a club

- Identification of problems & Its Scientific solutions
- Experiments and Activities
- Talks from Scientists
- Challenges or Competitions
- Award Schemes

BENEFITS FOR SCHOOL

We will have our skilled and experienced science communicators running regular workshops and activity sessions at your school. Our hands-on projects and activity courses are designed to wholly engage students with the scientific method whereby they learn to hypothesize, fairly test experiments, understand, explore and communicate results just like in the real world. Specifically the course is designed around hands-on science experiments per each fifteen days according to their syllabi and national curriculum that the students run themselves rather than a stations-based approach we spend the time to ensure that the children engage with each concept presented and have fun while doing so that science subjects and its theories will not feel burden for them anymore. Some other advantages are as following:

- Promotion by PSC website, PSC YouTube Channel, Print and Electronic Media.
- Preparation of inter-school Science Exhibitions and Olympiads (Science Olympiad, National Science Talent Contest).
- Preparation of Science projects for different science fair competitions like Google science fair, INTEL ISEF etc.
- Training of teachers for hands-on skills development and inquiry based learning methodology.

- Science passionate students of the school will be allowed to use PSC lab and workshop for their project making
- Soft skills development of the students such as idea pitching, presentation skills, confidence building, leadership and team working and report writing skills.

HOW TO EXECUTE

1. **Instructors**

Four instructors of PSC will conduct classes from 9am to 1pm fortnightly.

2. **Class/Activity Duration**

Two full day will be given by PSC facilitators from 9am to 01pm and each class / activity duration will be of 75 minutes in which students will not only design their hands-on project but all the theories and concepts behind the activity will be explained to them.

3. **Material**

All material either for individual or group project will be provided by Pakistan Science Club.

4. **Tools**

All the necessary tools from scissors to drill machine as per required for the project will be provided from PSC side.

5. **Project Manuals**

Complete project making manuals will be provided by PSC including material list, tools required, construction steps with pictorial representation to every student before each activity so that they could get complete guidance and instructions.

6. **Risk Assessment**

Risk assessment and safety precaution such as safety glasses, gloves etc for each activity will be supplied by PSC.