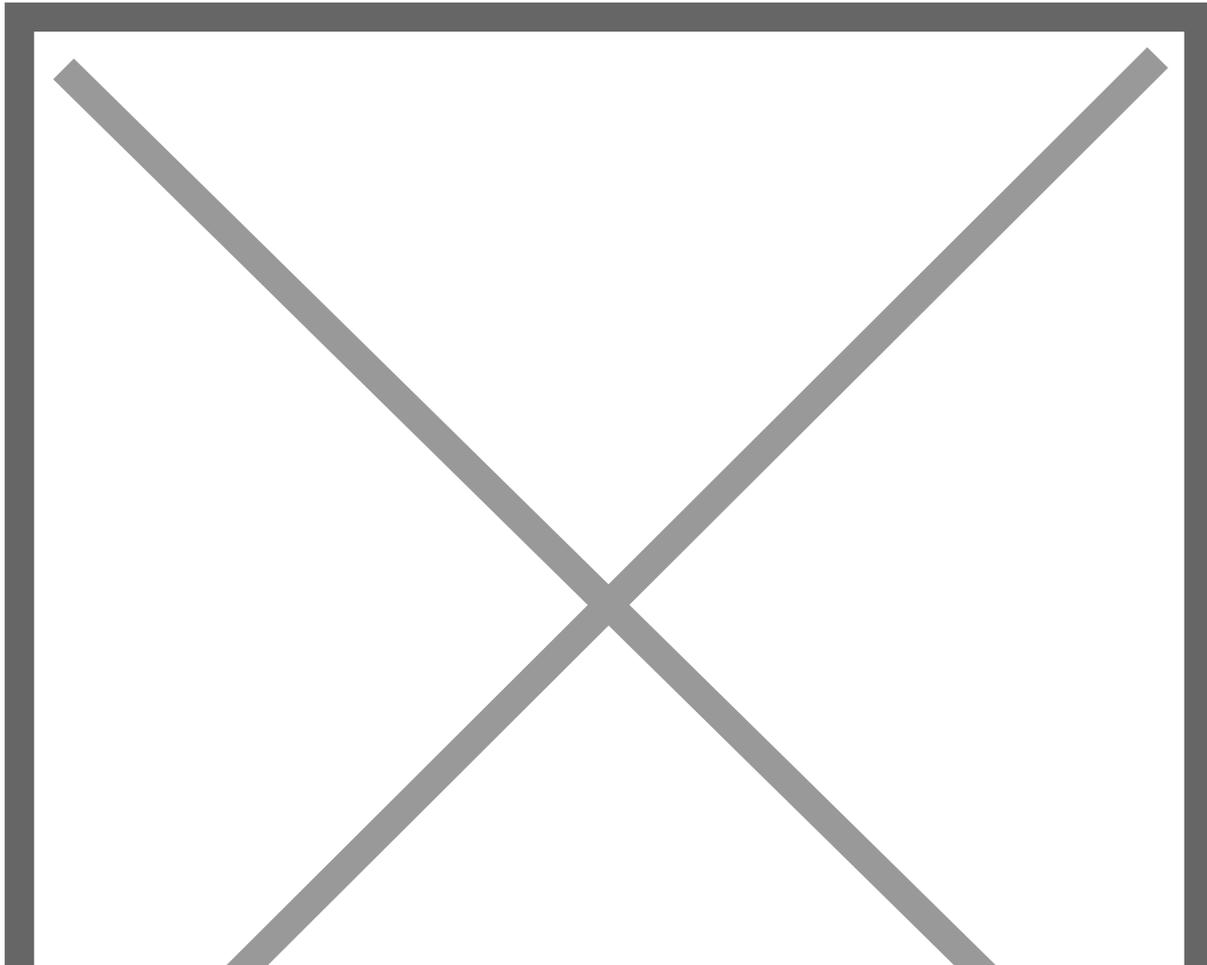


Training outline

There are three types of training as explained in the diagram below-



Based on the diagram given above, it can be observed that all the three forms of training are different in their objectives and structure. The training for teacher educators or resource persons is different from the teacher training conducted for teachers. The former has detailed sessions about the CLIX program but also introduces the blended online courses- *RTICT* for professional development. These extra components intend to prepare teacher educators to lead teacher training in their respective states. The four day teacher training model is largely subject-specific orientation with focus on CLIX module exploration and domain-specific pedagogy. The refresher training condenses this even further since it is aimed at teachers who have already undergone the training but need to brush up their concepts and understanding. It also provides space for revisiting the modules and pedagogy through their CLIX classroom/lab experiences.

The CLix Modules' Training Objectives

The CLix digital literacy curriculum called Invitation to CLix (I2C) has been modeled on the idea of microworlds to develop a constructionist digital literacy learning environment to not just enhance digital literacy skills of learners, in isolation, but to develop fluent digital users in a context that would motivate and connect the digital world for both students and teachers with their reality and school worlds. Digital fluency is not only about learning to use a tool but developing the skills to construct meaningful artifacts with the tools (Resnick,2002). In I2C, the microworlds have been designed to provide multiple representations, open-ended activities to explore, manipulate and create artifacts in order to practice the skills, develop ways of thinking, strategizing and forming ideas and concepts that enable students to focus and connect on the important relationships of the skills being studied within the regular school curriculum.

Seymour Papert (Papert,1980) developed a new concept of microworld intended to revolutionize the use of computers in education. The idea of a microworld combines the use of computers in education with the learning theories of constructivism and constructionism. Constructivism is a theory of learning where the basic premise is that learners construct structures of knowledge in their minds while engaging in an activity. Constructionism is a learning and pedagogy theory where learners construct or build knowledge structures in their mind by building external artifacts, physical or virtual that can be shared, edited and reflected upon. A microworld is a constructionist learning environment that enables students to explore, manipulate and learn from feedback in a virtual world (that depicts a slice of a real-world scenario with strict boundaries); design and construct physical or virtual artifacts and through this process enable learners to develop ways of thinking, strategizing and building or constructing concepts and ideas (Noss & Hoyles, 2017).

This constructivist pedagogy was extended to the subject modules: English (Listening and Speaking Skills), Mathematics (Geometric Reasoning, Proportional Reasoning, and Linear Equations) and Science (Atomic Structure, Basic Astronomy, Ecosystem, Health and Disease, Motion and Sound).

Objectives of i2C training session

At the end of 1.5 days, the teachers will

- Understand the use of ICT in education with reference to TPACK
- Appreciate the need for a constructivist classroom and the affordances of technology to enable this.
- Know to navigate CLix Platform
- Learn to use at least 02 i2c tools related to their subject pedagogy
- Create a rudimentary ICT-based lesson plan related to their teaching.

Objectives of English Training Sessions

At the end of three days, the teachers will

- Articulate the need for a constructivist classroom with technology affordances made available to students for their subject teaching.

- Know to navigate CLIX English Modules
- Map the CLIX English learning objectives to their textbook concepts
- Demonstrate the use of CLIX English Modules as they would use with their students.

Objectives of Maths Training Session

At the end of three days, the teachers will

- Articulate the need for a constructivist classroom with technology affordances made available to students for their subject teaching.
- Know to navigate CLIX Mathematics Modules
- Map the CLIX Mathematics learning objectives to their textbook concepts
- Demonstrate the use of CLIX Mathematics Modules as they would use with their students.

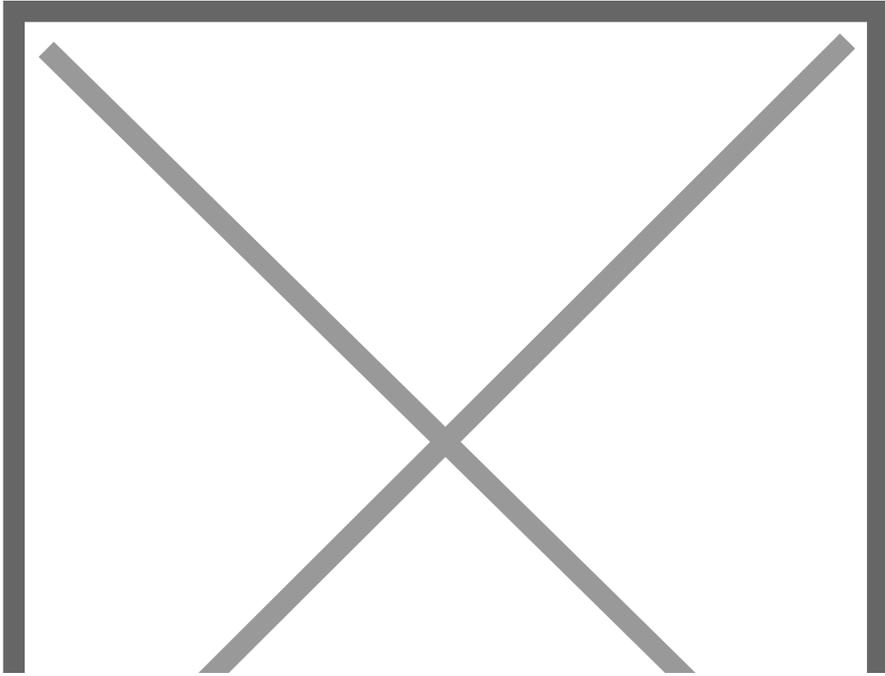
Objectives of Science Training Session

At the end of three days, the teachers will

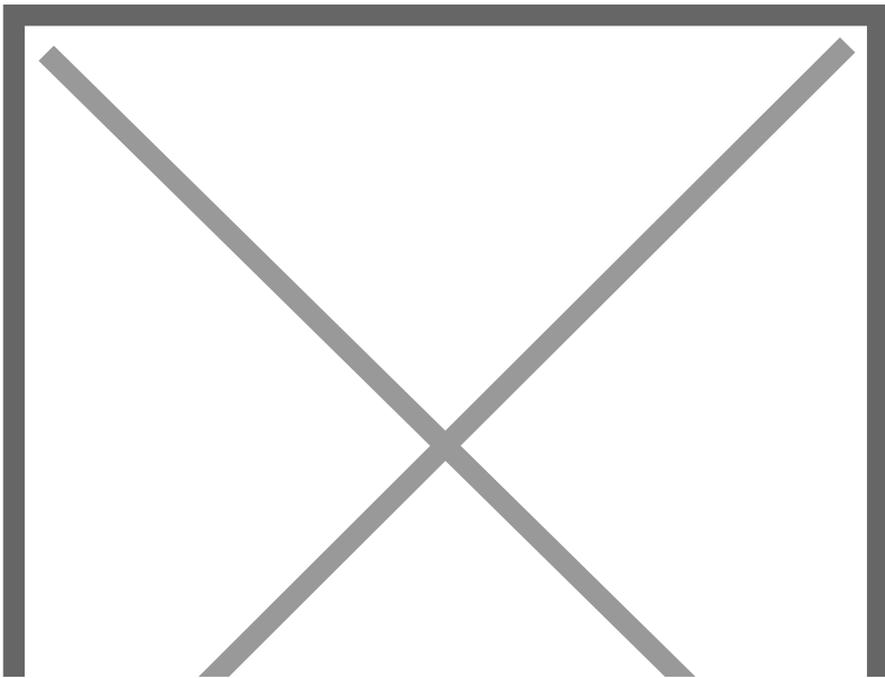
- Articulate the need for a constructivist classroom with technology affordances made available to students for their subject teaching.
- Know to navigate CLIX Science Modules
- Map the CLIX Science learning objectives to their textbook concepts
- Demonstrate the use of CLIX Science Modules as they would use with their students.

Training Requirements

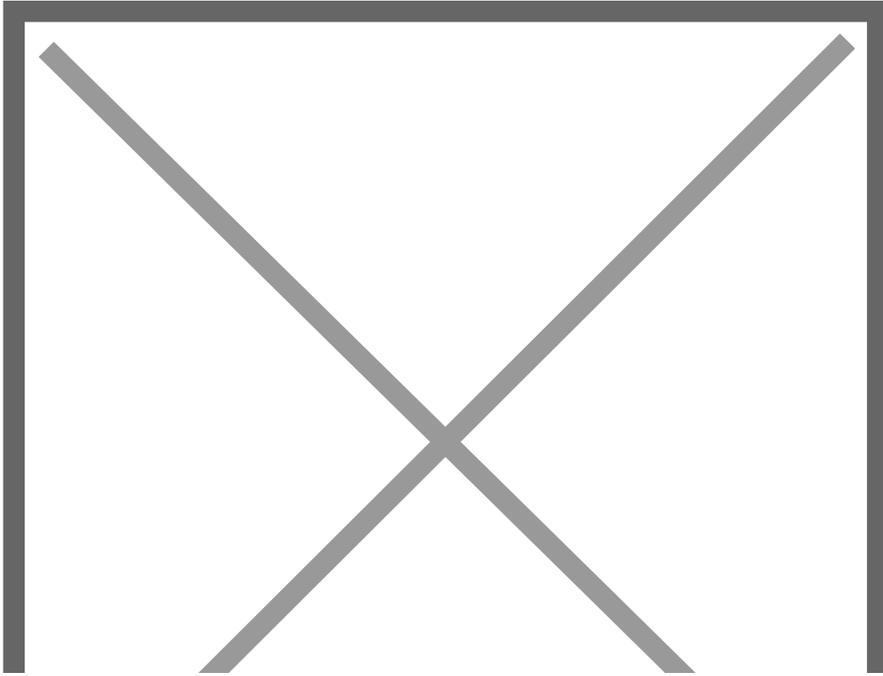
Any training requires immense preparation to be a successful program. A work well begun is, indeed, half the work done. A core idea of this lies in understanding lab requirements. The CLIX TPD Modules needed two kinds of workspaces: one a computer lab set-up and space to dialogue, perform experiments, do activities and so on. While having a lab with a lot of open space and movable chairs works, having a classroom to the side and access to open space for especially Science experiments is best.



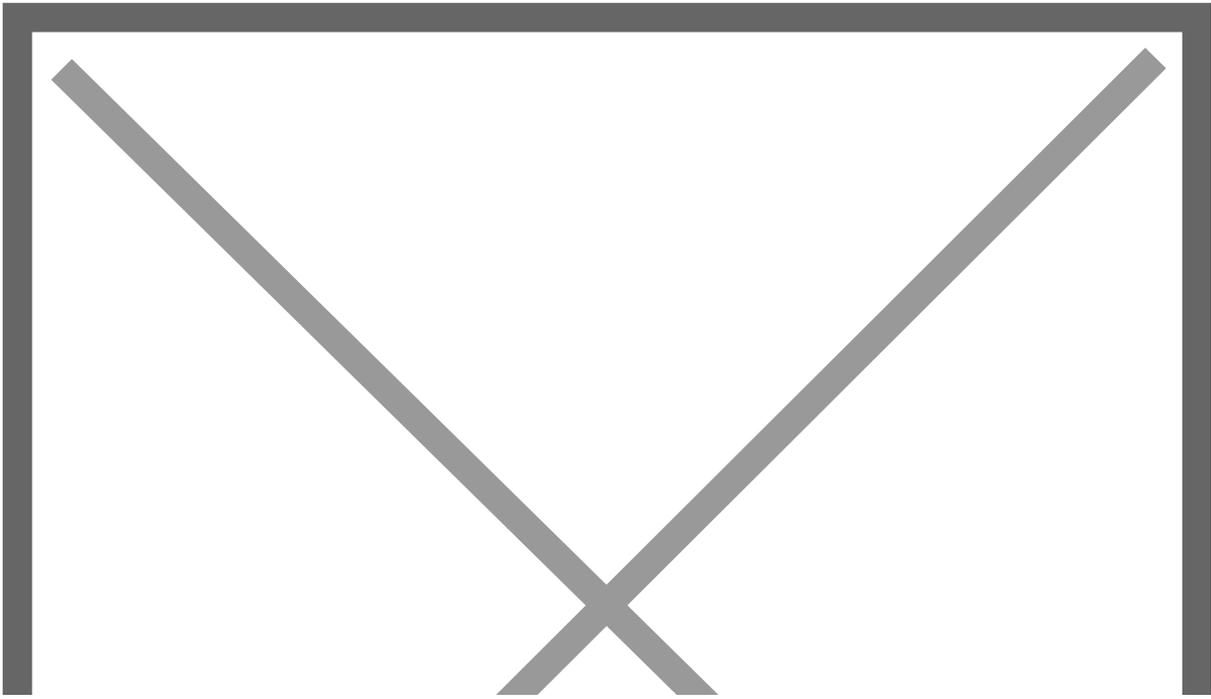
Space for Facilitator to walk to help.



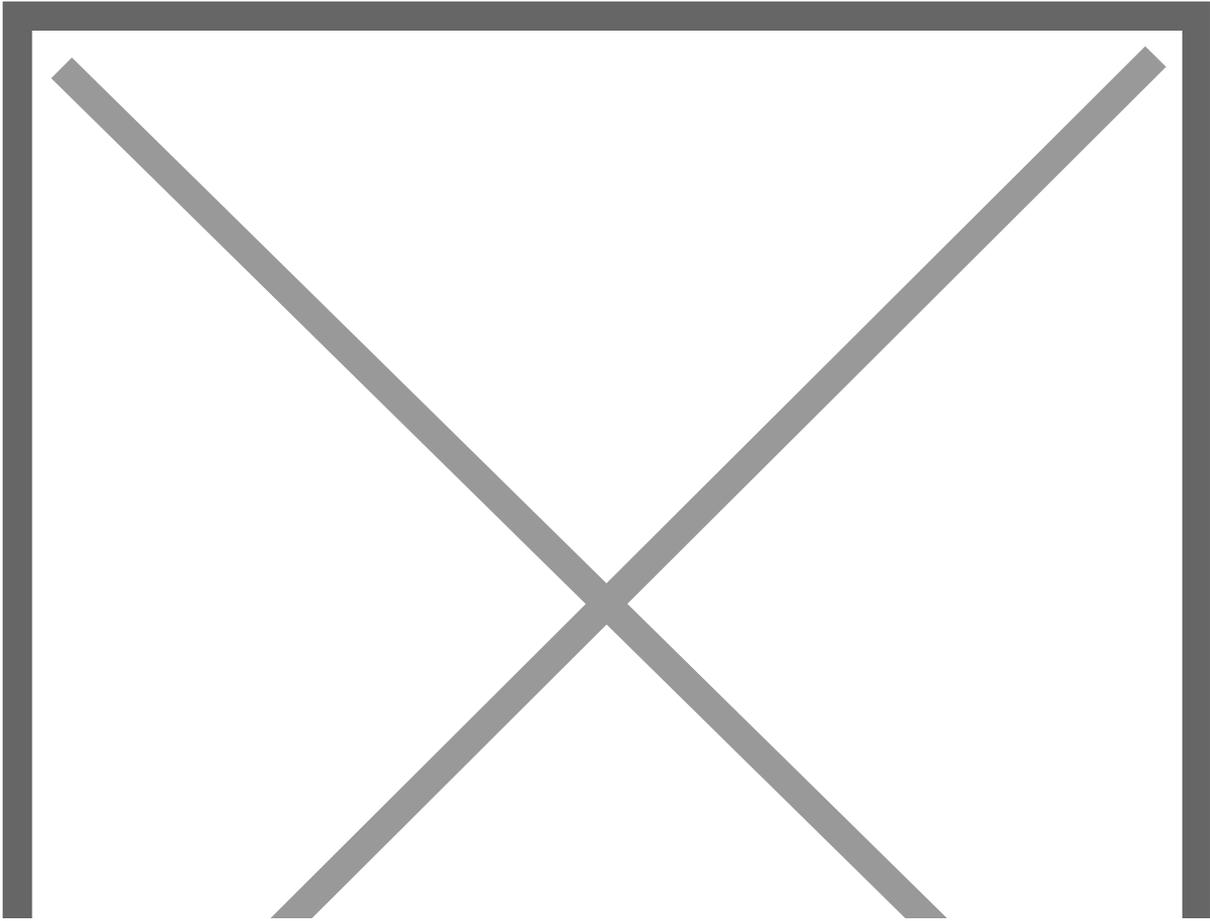
Movable chairs for collaborative learning in pairs or groups of 3-4.



Projector, Screen and Speakers to make Show and Tell easy. And if the screen cannot be set up in the proper space, use the wall :)



A whiteboard (or chalkboard or a flipchart) to draw, jot down whole group discussion points, etc.



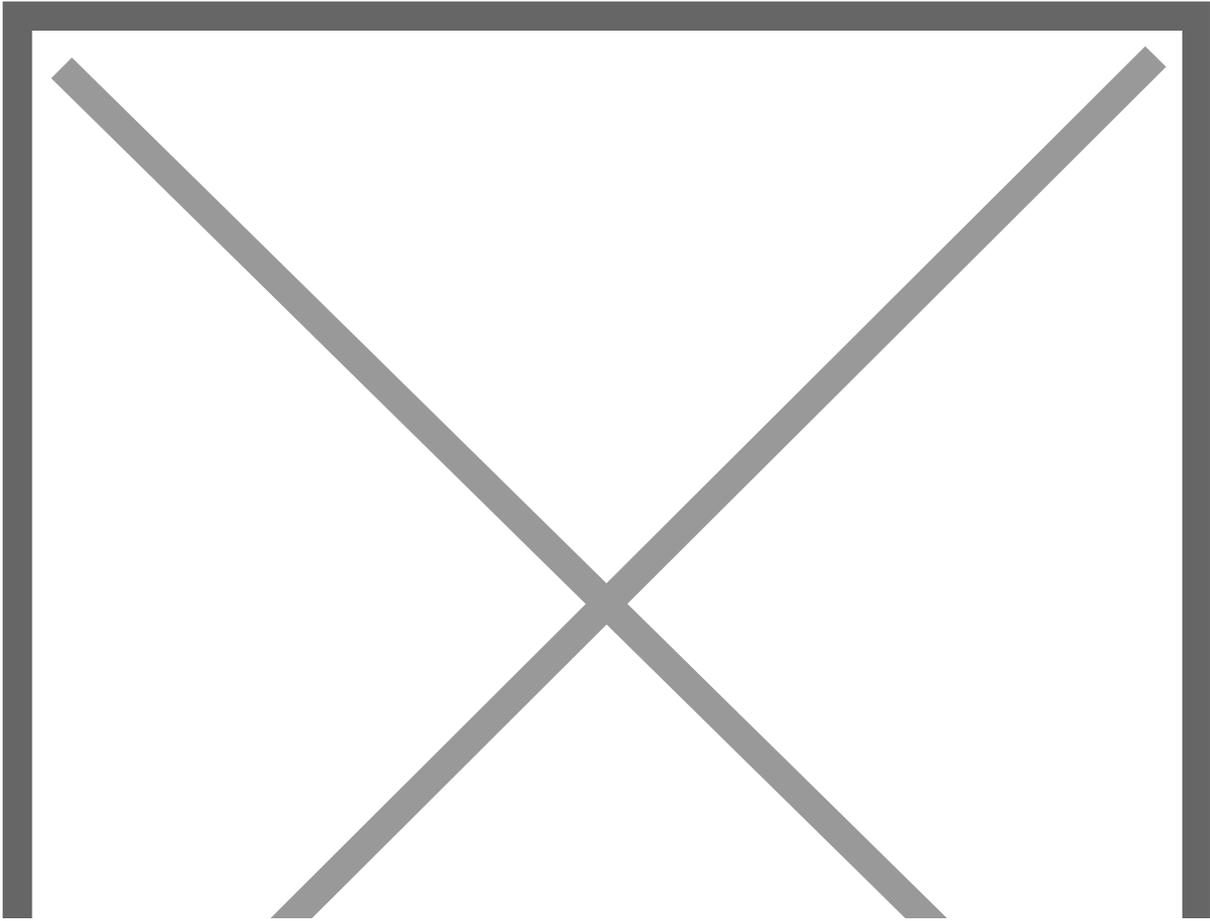
Using school labs for training is also possible.

<https://drive.google.com/a/clixindia.org/file/d/1wdfgTw6HXCtsEFTgnWgZsZpujxbkiKQu/view?usp=drivesdk>

A video sample of the projected screen, a blackboard, the facilitator and the participants.

<https://drive.google.com/a/clixindia.org/file/d/1K57KUY8M-E36qNOG2GUlyzrPjugQRlIQ/view?usp=drivesdk>

Video Sample: A Space for Small Group Discussion. Notice the resources: Textbook, the CLix Module, the RTICT handbook, the student workbook and teacher guide, A4 sheets, but most of all the discussion among the participants :)



A Space to Dance even :) Dance based Icebreakers are fun.

See here a sample video of one in a constrained space:

<https://drive.google.com/a/clixindia.org/file/d/1igBCOSVdNsoVtfYHgtkiBkJZiatxMmEB/view?usp=drivesdk>

Video Sample: The Dance Icebreaker :) Have fun in training.

<https://drive.google.com/a/clixindia.org/file/d/1jAjyBrbEkA6VkcuvFqKpp7AmAYDGjy87/view?usp=drivesdk>

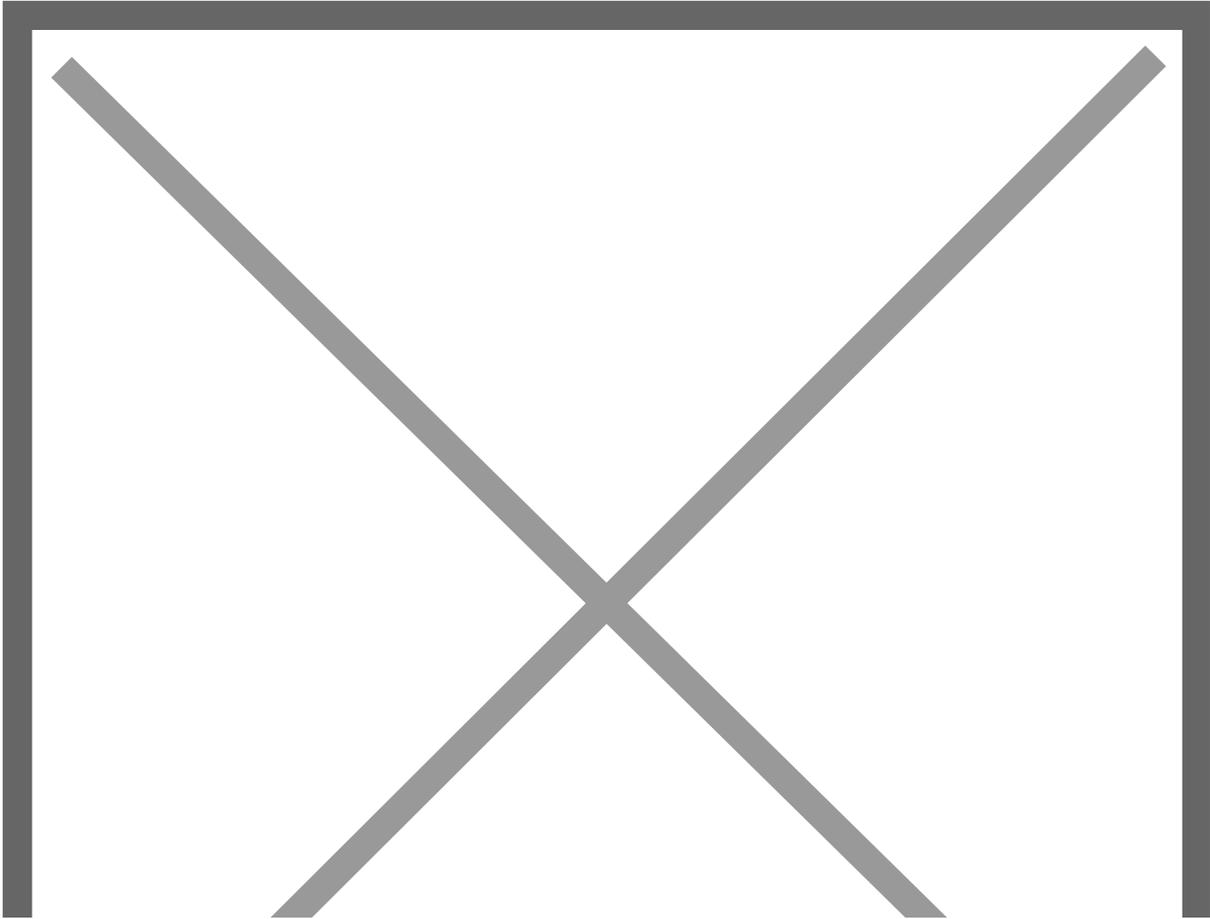
Video Sample: Using the local language in training is always good. If you cannot speak it, get a local to translate for you. Inclusive learning: inclusion of languages.

<https://drive.google.com/a/clixindia.org/file/d/1F01loHAHPw4c6-2cxenBt7OtbgBdyHxW/view?usp=drivesdk>

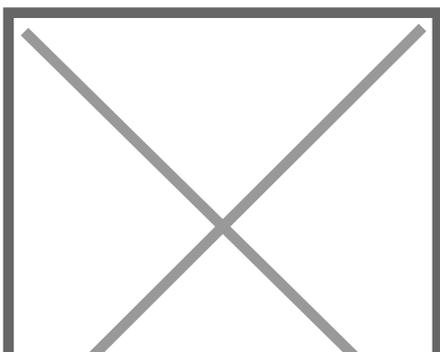
Video Sample: Using local resources - This school had a guitar, so the Sound module of Science training was adapted to exploit this resource.

<https://drive.google.com/a/clixindia.org/file/d/1Rso2C7UgQD5l1SpEQAKbBGsvklZIR8F7/view?usp=drivesdk>

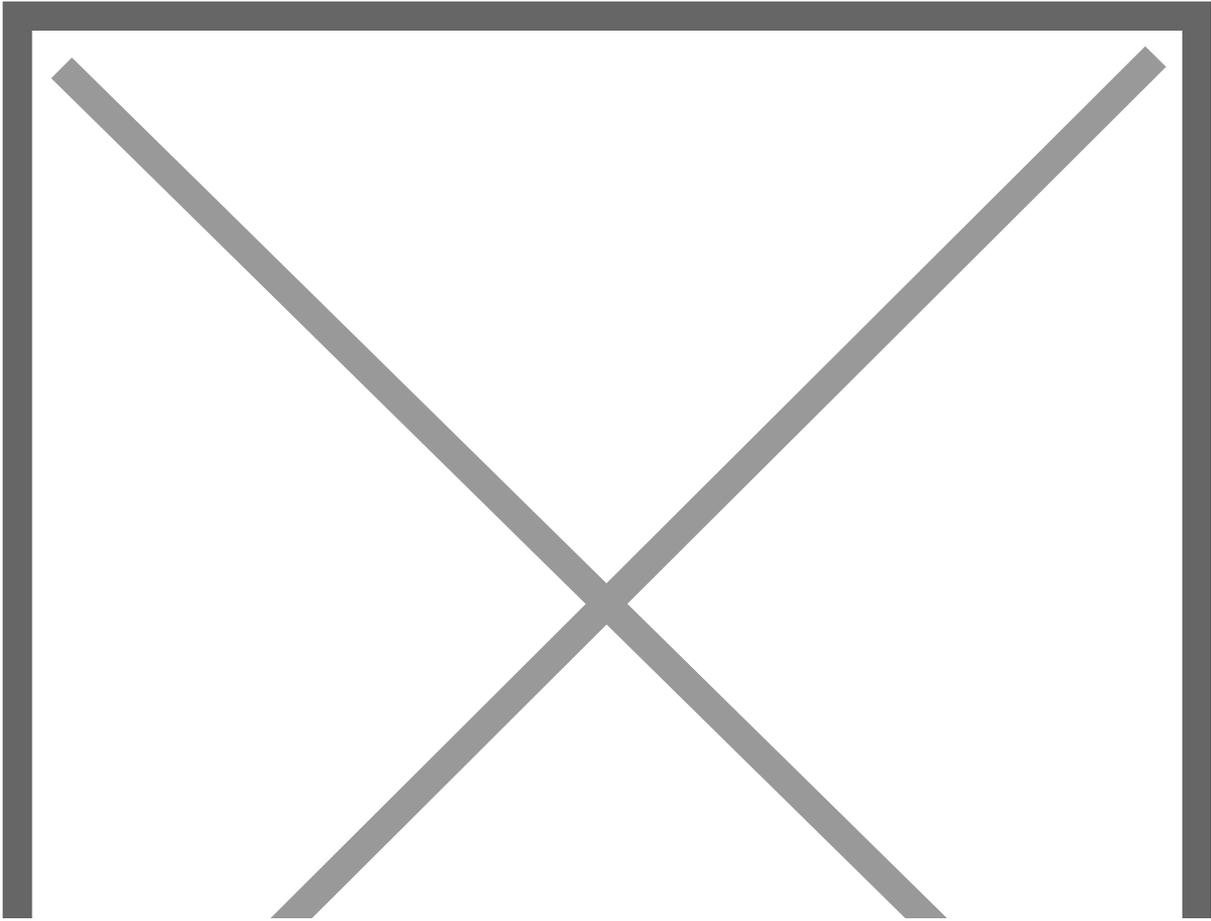
Video Sample: Most of all have fun in your training. Learning will occur.



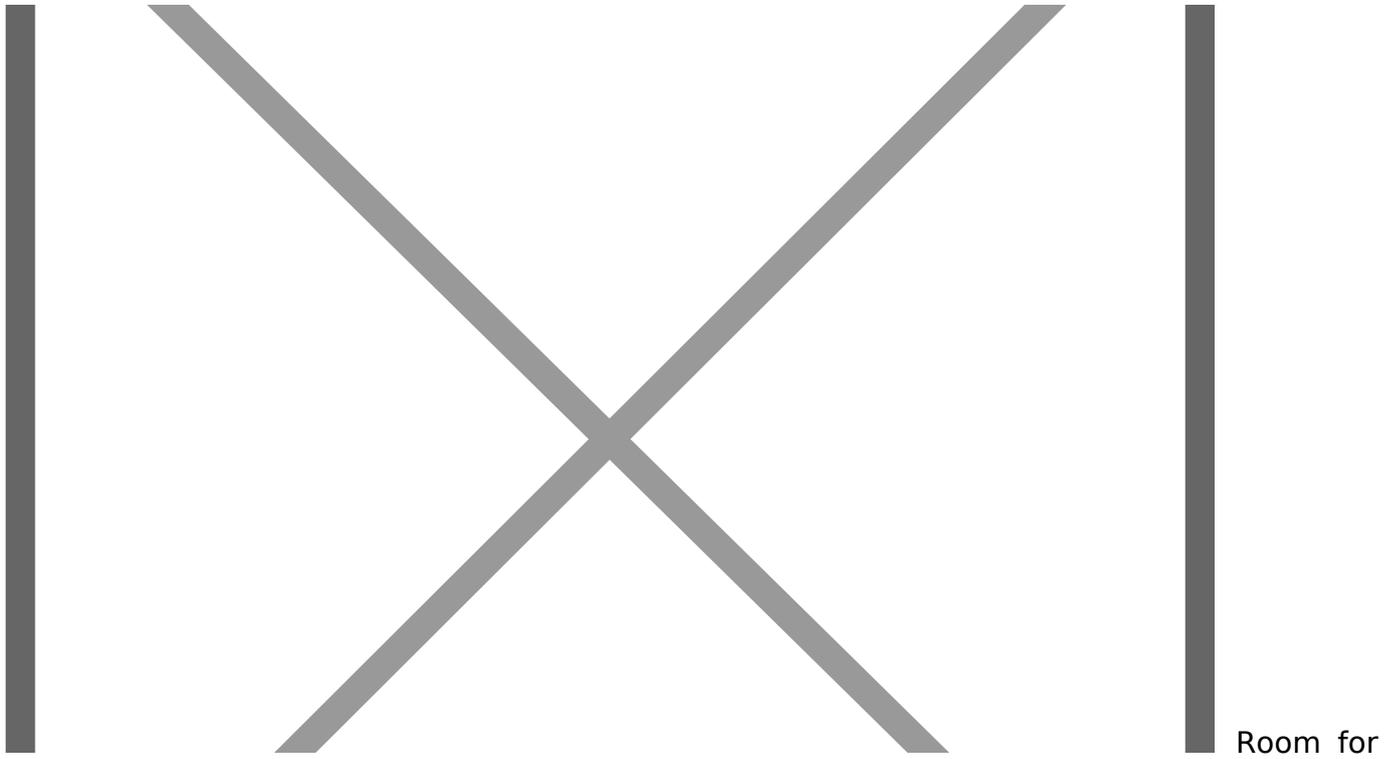
A Space to Experiment: Open Corridors will do. A willingness to be flexible is more important than the parameters of physical space.



Open Spaces are so much fun to do experiments in (CLIX Science Module: Motion)



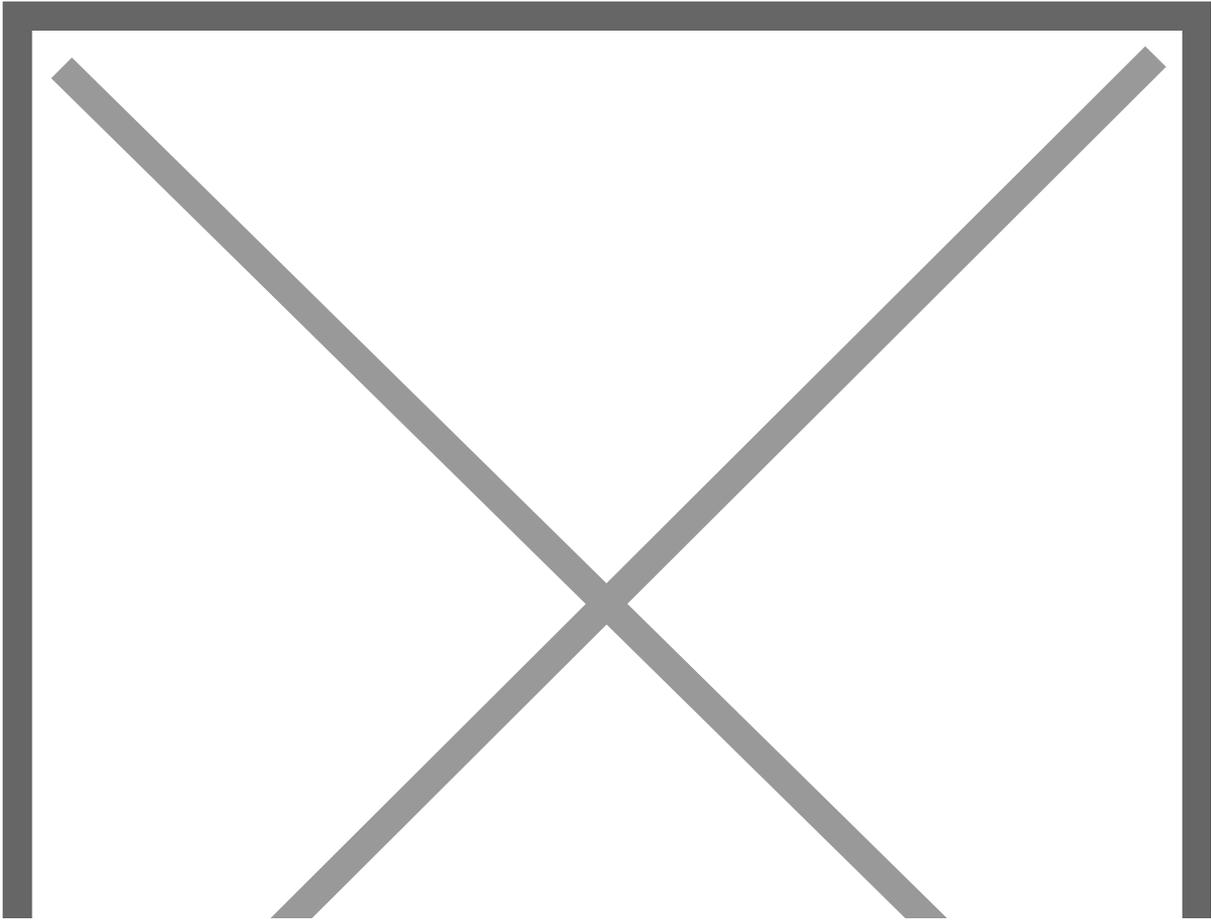
Enabling Small Group Discussions. Provide the space and instructions and leave them be.



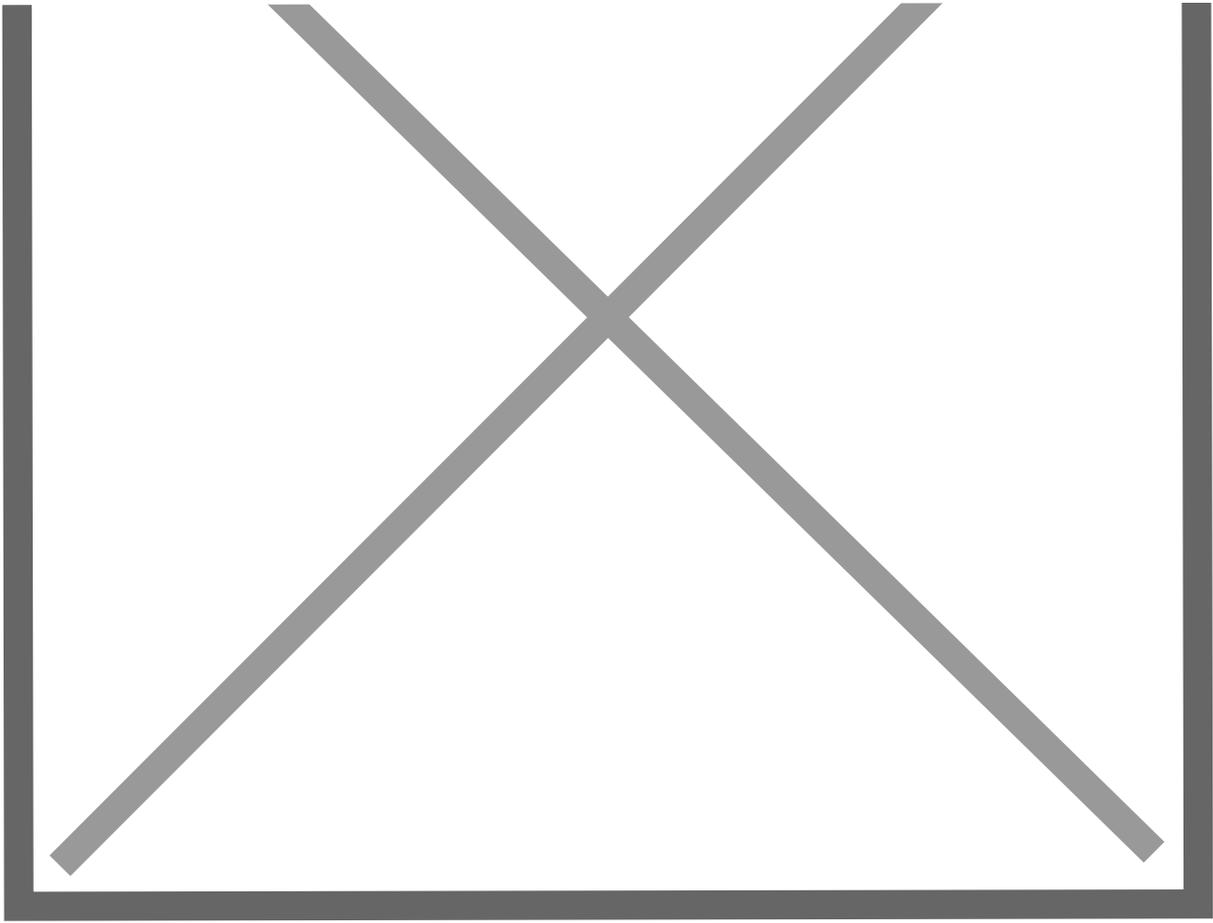
Experiments: Some Science Experiments are best performed in a non-digital space. Electric circuits and chemicals are best kept apart.

https://drive.google.com/a/clixindia.org/file/d/0By2idi_NH215b2RfM05abnVScmc/view?usp=drivesdk

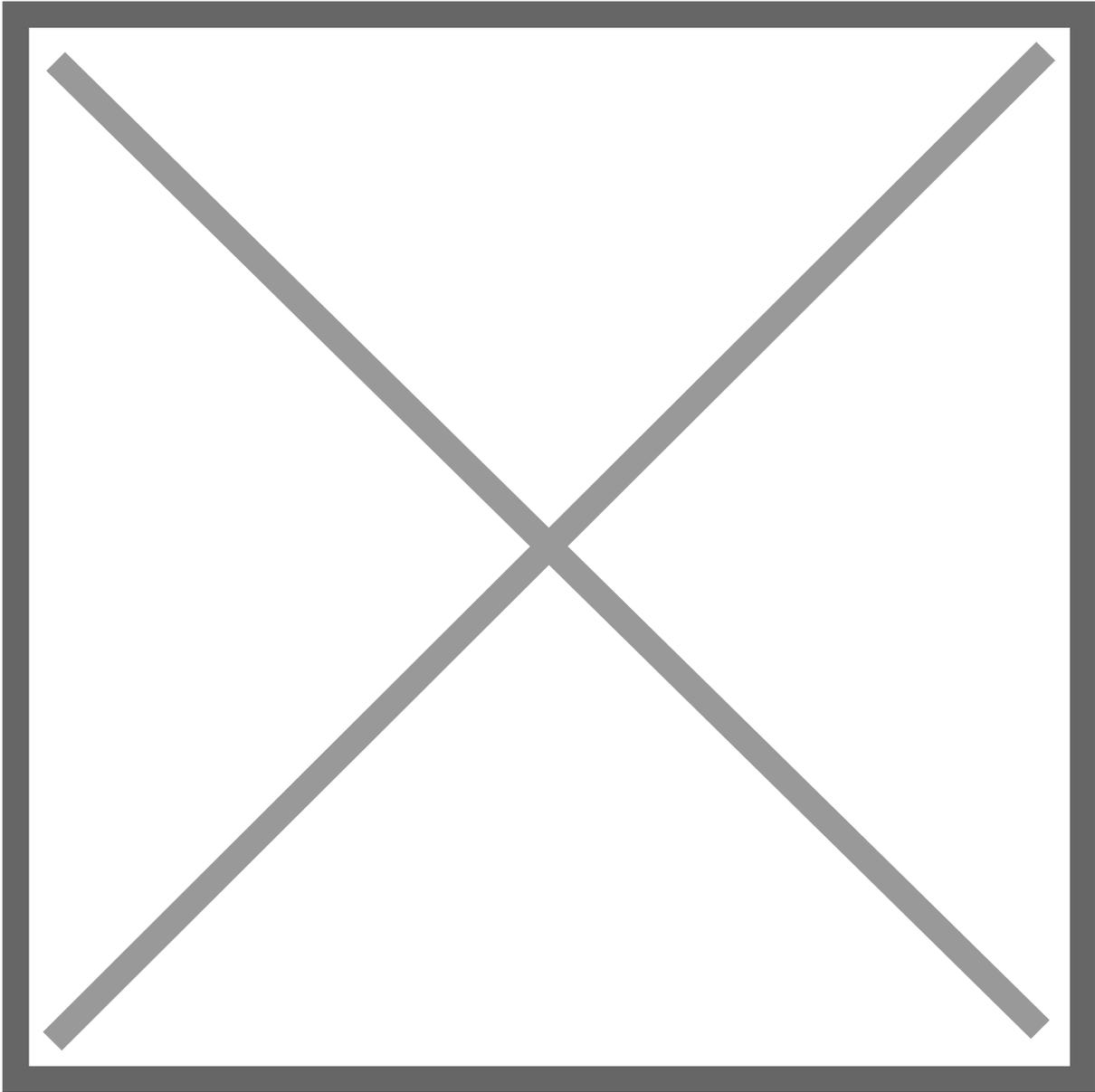
Video Sample: Science Experiment (Ecosystem)



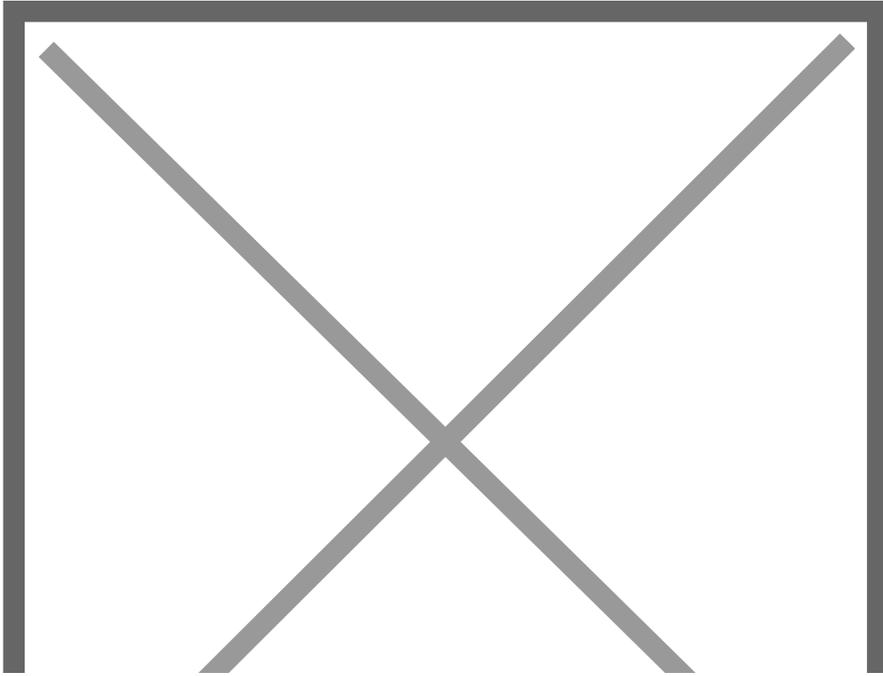
Check the lab the day before training. Check every computer and software work as they should.



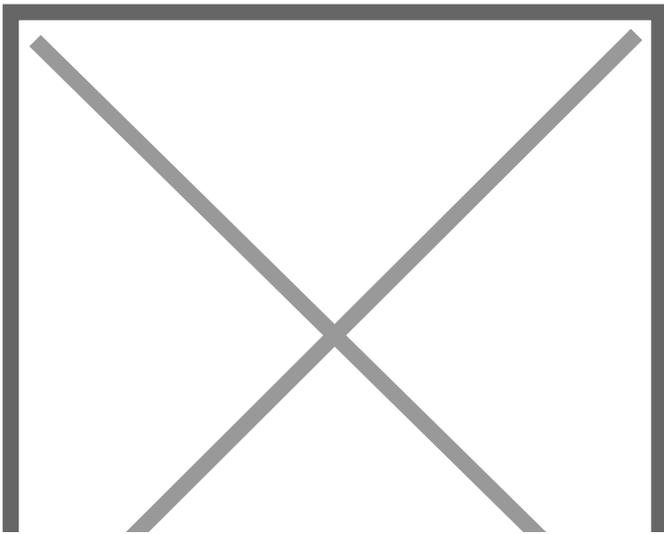
Have the buddy logins ready for teachers to take one and write their names and details in the first couple of columns. It also models how they could distribute the login IDs in their school.



Participants bringing storage devices always helps. You could suggest that they bring Pen Drives to take away tools and/or the artifacts they have created.



Group Photo: A Requisite: A Memento to Cherish :)



Media coverage is always motivating :), but this is not essential.

Revision #8

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