USING ELM IN LARGE CLASSES

TEACHER PREPARATION

1) Plan what ELM activity will be assigned in the computer station.
2) Make sure all the devices are functioning in the lab or in your classroom.
3) Plan the activities for 3 or more stations in the classroom (see suggestions at end).
4) Prepare each of the classroom stations using available materials such as:
   - Flash cards (with numbers, equations, and shapes).
   - Drawing material (paper and colouring pencils).
   - ELM worksheets (from the ELM *Teacher Resources* site or the binder).
5) Prepare a run-through of each station before starting.
   As a reminder for yourself, write out a specific set of instructions for each station – see below for help.
6) Share the lesson objectives with the learners in the classroom before starting the lesson. This helps in managing time.

LEARNER PREPARATION

1) Provide an overview of the objectives of the lesson.
2) Sort the learners into groups.
3) Describe the activities available at each of the different stations and the ELM activity they will be using at the technology station.
4) Assign one group of learners to the technology station and ask them to log in to the Learning Toolkit+ and to go to the activity. Stress the importance of each learner signing into their own account.
5) Assign the other groups to a station. Ask them to move to the stations and begin the station activity.
6) Set a time limit for work in each station, then rotate learners through the stations.

Note: If you feel learners need more time at the ELM station than the others, you can direct them to remain at that station for two rotations. Alternatively, if you have enough devices, you can divide the class in half. Half of them use the devices while the other half rotate in the other stations, and the learners swap at the mid-way point.

USING THE STATIONS

1) If time allows, learners should rotate between the stations (set one way of rotating, i.e. clockwise or counter-clockwise).
2) Assign a station to each group and supervise as they do the activities.
3) Use visual cues for learners to identify stations easily.
4) The time at each station should be indicated.
   Suggested 10-15 minutes for a total of 30 minutes.
5) If time does not allow for completion of an activity, learners can start at that station in the next Math lesson.
6) Rotation can be done by alerting learners using:
   o Bell
   o Clapping of hands
   o Using gestures
   o Word of mouth

Cooperative Learning

- Structure of groups: Learners should be grouped carefully, by considering the size of the group, whether to group randomly or based on ability, and how long the group will work together.
- Role Assignment: Each person in a pair or a team is given a particular role. Some examples:
  - o Time Manager: makes sure the group finishes on time.
  - o Reader: reads aloud any materials and checks that everyone understands.
  - o Facilitator: invites everyone to participate and to work well together.
  - o Observer: watches how the group is working together and notes what they are doing well and any problems.
- Build social skills: learners need to communicate and interact with each other in a socially acceptable manner, such as listening to others, taking turns, and apologizing. These skills may develop naturally or may need to be explicitly taught.
  - o The 'observer' in the group could take notes on a specific behaviour (ex: did everyone get a chance to speak?) to help you evaluate learners' progress.
- Adapt the Jigsaw strategy: Use this strategy when you can divide the material into different sections. For example, you can use this strategy to introduce different shapes. The *focus* groups could be assigned a different shape (ex: circles, square, rectangle, rhombus, triangle). Together the learners in each group become masters of their assigned shape and create a list of rules. They might focus on the number of sides, corners, and angles; curved or straight lines; any rules for length of sides or degree of angles; and look for examples they see around the classroom. When done, direct learners to regroup into their *task* groups, and teach their shape to their teammates. *Note: If you've already introduced the shapes listed above, you can still use this strategy with new shapes (oval, pentagon, hexagon, trapezoid, etc.), different kinds of triangles (equilateral, isosceles, scalene, right), or 3-D shapes (cube, cone, cylinder, etc.).*

Visit the Cooperative Learning module to learn more.

SUGGESTED STATION ACTIVITIES

- Worksheets related to your lesson's topic from the ELM Teacher Resources or other prepared materials. Ask learners to choose one and complete it or assign them a specific worksheet best suited to their skill-level.
- Reusable classroom activities related to your lesson's topic, such as number or shape cards or arranging tokens to decompose numbers. The ELM Teacher Resources site provides suggested classroom activities.
- Colouring pictures and images:
  - o On a table have various ELM colouring pages that learners can choose from.
  - o Ask learners to choose one and complete it.
- Question and Answer:
  - o Create 4-5 short word problems that learners need to solve.
    Note: you can also create reflection questions that get learners thinking of real-world examples where they apply the mathematical concept in the daily habits.
  - o Make sufficient copies of questions.
  - o Set up a station with your questions sheet and pencils.
  - o Learners take one sheet and complete the questions.