Lesson Title	The Fireplace – 2nd trial
Subject	Mathematics
Teachers	Ms. Louise Vella Ms. Lara Libreri Ms. Marilyn Saliba Ms. Ramona Galea
Observers	Mr James Calleja (University lecturer) Ms Mariella Galea (Education Officer)
Year Group	Year 9 Track 3 – 24 students
Date	15th May 2019
Time and Duration	5th lesson – 11:05-11:45 (40 minutes)
Lesson Purposes	Students will be able to: • Relate a real-life problem to mathematics • Apply different strategies for solving the problem. • Appreciate the connection between different mathematical topics such as trigonometry, Pythagoras's Theorem, scale drawing and constructions.
Resources	Before the lesson, the following equipment is to be prepared: • 6 life-size fireplaces (built from cardboard by teachers) • Task written on laminated paper • Power point and video • Measuring instruments such as measuring tape and rulers • Compasses, protractors and calculators • Extra resources so that students need to decide which to use for the task • 6 A3 papers for student presentation • 6 permanent markers • Rough paper
Classroom Setting	6 groups of 4 students each
Introduction (10 minutes)	• Welcome the students and explain the reason for the observers present (1 minute) • Show the video to the students (4 minutes) • Display the task on IWB and explain to the students that they will be working in pairs on part (a) (1 minutes) • Distribute the task sheet and give the students 1 minute to discuss the procedure for a solution. A short whole class discussion follows. Probe students to focus on the properties of a right angled isosceles triangle (4 minutes)

Development (10 minutes)	• The teacher invites the students to divide into groups of 4 (1 minute) • The students are informed that at the centre of the classroom there are a number of resources available for them. They have 8 minutes to work on the given task and answer part (b). Inform students that they need to come up with two different methods which need to be presented in the plenary session (9 minutes) • The teacher walks around the groups to observe the methods being used to solve the problem
Presentation (12 min)	• Students from each group present and explain their 1st method in about 1 minute. • Lead another round of student presentations to explain their 2nd method. At least the concept of how to proceed with another solution is expected here. This should take slightly less than 1 minute each.
Conclusion (3-5 min)	The teacher takes note of the methods explored during the presentations and helps students to be critical of their own work and that of others. Are there any flaws in our method? Are there any assumptions we are making? Is there a method which might lead to results which are more precise?