

ESTEEM

The ESTEEM program has been established to provide a challenging learning environment that not only covers the essential components of scientific, mathematical and technological knowledge but also importantly provides context for students to apply their skills in a number of project/scenario-based learning activities. These contexts are critical to the development of Higher Order Thinking Skills i.e. transfer of learning (not only to remember, but also to make sense of and be able to use what they have learned in new situations) problem solving and critical thinking skills, which are critical requirements for VCE and 21st Century careers.

We are endeavouring to develop students' intrinsic motivation by providing situations requiring a deeper level of student inquiry, replacing more traditional learning models that in the past have largely encompassed textbook-based questions. This new approach seeks to enable students to apply their science, mathematical and technological skills in context with the challenge at hand, rather than a sequential method of learning, applying, and moving to the next task.

Although in its infancy, we are already seeing a number of positive impacts from the program including increased levels of motivation in many students when working to find innovative solutions to problems, and increased the level of classroom collaboration and discussion. We have observed that in some activities, students are willing to extend beyond the scope of the original problem and in turn assume the role of a peer mentor.

The challenge for some students, and in turn for us as educators, is to break down conventional expectations of students obtaining an instant answer, or the 'right' answer, to a given problem, and instead promote an open-inquiry learning environment where students are required to think more deeply and creatively to develop a solution. We believe this approach not only equips students with the skills they require in their future study and careers, but also reinforces mathematical and science content through applying their knowledge in authentic contexts.

The ESTEEM program runs over 15 periods in a ten-day cycle in semester 1 and 18 periods in a ten-day cycle in semester 2.

Example of units include

- Thunderstorms Asthma
- Robotics
- Kite Design
- X and Y marks the Spot
- Amusement park ride of the future

If you would like further information on ESTEEM, please contact Mrs Jennifer Henderson (ESTEEM Coordinator) at j.henderson@damascus.vic.edu.au