



**STEMQuest.ie**

Engage, Inform, Inspire

# [Program Overview]



**STEMQuest.ie**

Engage, Inform, Inspire

**Promoting**

***Science, Technology, Engineering and Math***

**In partnership with**

**Discover**  
Science + Engineering

**STEPS**  
to engineering

Engage students with your organisation

[www.STEMQuest.ie](http://www.STEMQuest.ie)

# About STEMQuest.ie

STEMQuest.ie is a unique online programme for secondary school students devoted to developing a positive and active interest in Science, Technology, Engineering and Math (STEM) concepts, processes and careers.

STEMQuest is a unique programme that bridges the gap between the classroom and exciting real world technologies, applications and career opportunities in an exciting, informal and incentivised way.

STEMQuest is a response to current government and industry concerns about the growing demand for a smart economy. We seek solutions to help ensure the breadth and depth of the STEM workforce.

Through the clever integration of internet resources and incentives, STEMQuest creates a positive attitude and engages the participant in a journey to the world of STEM applications, technology and showcasing STEM technologies, applications, career opportunities as well as the companies that provide these opportunities.

**Participation in StemQuest.ie is provided at no cost for students and schools.**



## 1. ENGAGE

STEMQuest uses effective incentives to engage students in interactive STEM content. By completing interactive and fun quizzes, students can win laptops, ipods and trips to the European Space Agency.

## 2. INFORM

STEMQuest.ie informs students of exciting, relevant and cutting edge STEM topics via online interactive media in an exciting, competitive and fun way.

## 3. INSPIRE

STEMQuest inspires students to take subjects and careers in Science, Technology, Engineering and Maths by immersing them in informal learning of fun, exciting cutting edge content in an incentivised and creative way.

# Why **STEM**, Why Now?

Science, Technology, Engineering, and Mathematics (STEM) are collectively considered core technological underpinnings of an advanced society.

*"The strong uptake of science at all levels of our education system is vital to the development of the knowledge-based economy on which the future prosperity of our country depends"*

**Brendan Smith**  
Minister for Children, TD

In many forums (including political/governmental and academic) the strength of the STEM workforce is viewed as an indicator of a nation's ability to sustain itself.

Public agencies, foundations, and private corporations have made major commitments to engaging young people with STEM issues as key to achieving an increase in Irish domestic higher education graduates and consequently a flow of qualified people for Science and Technology.

**STEM**Quest bridges the gap between the classroom and the excitement of new world technologies and career opportunities and to nurture a more positive attitude and interest in STEM topics to engage, inform and inspire secondary school students to careers in STEM

- The CAO and the 2012 employment forecast from FAS and the Economic and Social Research Institute (ESRI), point to a widening skills gap in IT and STEM related careers.
- Less than 20% of students took higher level maths in the leaving cert.
- 4,500 students failed Maths in their leaving cert in 2009.
- Only 8% of students took higher level physics in 2009
- Application for engineering and technology degree courses decreased 9.8% in 2009

*"The better use of technology in schools is vital to ensuring that students leave with the skills needed to participate fully in today's modern economy"*

**Paul Rellis, Managing Director of Microsoft**

*"Our talented young people, the education sector and ICT are central to developing our 'smart economy'"*

**Minister for Education, Batt O' Keefe**

# Programme Overview



**STEMQuest.ie**  
Engage. Inform. Inspire.



## Mission:

STEMQuest.ie will engage with students to develop a positive and active interest in Science, Technology, Engineering and Math (STEM) topics and career opportunities through its unique online quiz and information programmes.

**Value:** To build a bridge between the classroom and the excitement of new world technologies and career opportunities and to nurture a more positive attitude and interest in STEM topics.

**Geographic reach:** Island of Ireland via Internet

**Purpose:** To identify STEM topics and careers those are essential for success in the future for all individuals and critical for success as a nation.

## Objective

Our program is a year-round learning experience for students. The STEMQuest competition is designed to foster an interest in and an understanding of STEM by engaging students in a fun learning experience in the informal setting of an interactive, user-driven website and provide inspiration to sustain their interest, showcase local STEM initiatives

and career opportunities, and inspire them to consider pursuing a career in Science, Technology, Engineering or Mathematics.

As a unique communications medium it presents the opportunity to add other topics and careers, such as wellness, environmental studies, and civics. We solicit the participation of teachers and provide feedback and reports on the results of students in their classes.

## Goal

The goal of our program is to respond to current government and industry concerns about the growing demand for a smart economy. We seek solutions to help ensure the breadth and depth of the STEM workforce.

STEMQuest.ie leverages cyber learning methodologies to reach our target audience of post primary students and will continue to evolve the use of emerging best practices.

## Methods

Engagement of students in STEM concepts is a key issue in attempting to attract more students to STEM career and educational pathways. STEMQuest.ie reaches students on serious STEM topics in a fun and exciting way. The prize incentives and competition elements sustain their interest. The strong links to science and technology organizations create an open relationship with potential future career opportunities and employers. This technological solution supplements current formal learning practice and provides new approaches to engaging traditionally underserved learners in STEM topics. The fun elements also address the lack of engagement which is often most prominent with the highest and lowest ability students.

In an effort to build bridges between informal and formal learning experiences, teachers and other adults are invited to register their class/club on the website, thus encouraging strong links between formal education, the inspiration of science and technology applications and a method to engage students with potential career opportunities. Teachers have the ability to review the participation levels of their students/members and to integrate this into their class programs.

Utilizing and improving cyberlearning technology as a means to achieve these outcomes is essential, as technology plays a tremendous role in the lives and learning of today's young people and tomorrow's workforce. In developing the project, the founders sought to make use of a relatively untapped venue for exciting students in STEM topics and occupations, one that students enjoy using. The program facilitates the clever integration of internet resources to engage the participant in a journey to the world of STEM applications, technology while showcasing STEM career opportunities as well as companies that provide these opportunities.

### Outcome STEMQuest Participants will:

1. Experience an increased awareness, knowledge and understanding of STEM concepts, processes and/or careers.
2. By developing a more favorable attitude toward STEM concepts, processes and/or careers students will be Informed and influenced positively for subjects & career choices in STEM areas. The primary focus of the program is students in secondary school students. Our research shows that this is where most students are considering subject preferences and career options.

## STEMQuest Quiz Example

A graphic for a STEMQuest quiz example. It features a blue background with a wireframe building and a yellow crane. On the right, a woman in a blue shirt and pink shorts stands next to a speech bubble that says "Follow the link I have constructed [here](#)". The USA Graduate logo is in the top right corner.

USA Graduate.com  
Engage, Inform, Inspire

Follow the link I have constructed [here](#)

Micron has developed some of the industry's best mobile memory solutions. How do they do more?

- A. They work with chipset vendors, OS designers, and other enablers to ensure their parts are optimized for the client's design.
- B. By making tomorrow's technology solutions available today.
- C. Great memory, great prices.
- D. Providing for all of types of information technology needs.

For more information on content and quiz examples please visit

[www.STEMquest.ie](http://www.STEMquest.ie) or our US and Canada websites at

[www.usagraduate.com](http://www.usagraduate.com) and [www.canadagraduate.com](http://www.canadagraduate.com)



# Partnership Opportunities



We provide an opportunity for partner organisations to get their message across to young people in a fun and engaging way. In addition we have a host of opportunities for partner recognition.

STEM Promotion	Marketing Materials	Association with Awards
Inclusion of <b>Content</b> in the interactive online quiz that showcases your organisation's technology and career opportunities and highlights your company's support of the programme with hyperlinks to content on your company's website	Company logo and recognition on all STEMQuest.ie <b>regional</b> marketing materials	Recognition as a sponsor at program events, interaction and presentations
Program content can be designed specifically around your company	Company logo and recognition on all STEMQuest.ie <b>national</b> marketing materials	Opportunity for company representatives to award prizes to students in all regions
<b>Partner Recognition</b>	<b>Marketing on line</b>	Opportunity for company representatives to award prizes to students in one region
Organisation name associated with the program on public relations initiatives and Press Releases	<b>Flickr:</b> Recognition on STEMQuest page	Opportunity for company to host prize award ceremony at offices in all regions
Media Kits	<b>Twitter</b> Recognition on STEMQuest page	<b>Additional Opportunities</b>
Press Conferences	<b>My Space:</b> Recognition on STEMQuest page	Customized opportunities e.g. Student Certificate (sample available)
Opportunity to showcase STEMQuest Logo on company outreach materials	<b>Facebook:</b> Recognition on STEMQuest page	Ability to distribute company prizes as part of the program, if applicable
Opportunity to market career positions and/or current promotions on all STEMQuest.ie regional websites	<b>Bebo:</b> Recognition on STEMQuest page	Opportunity to help creation of program in other markets

## STEMQUEST OUTREACH & MARKETING RESOURCES

	<p>A strategic email marketing campaign will promote the program to educators in target markets to encourage promotional support of the program. Another email marketing campaign will promote new additions to the program to all previous teachers, students, and parents.</p>
	<p>A comprehensive social media campaign will involve student-targeted profiles on MySpace, Facebook, Twitter, and Flickr, along with a business-targeted group on LinkedIn. To encourage participation rates, special competitions will occur within these platforms with the opportunity to win additional prizes.</p>
	<p>Promotional partnerships will be developed on a local and regional level to help promote the program to the target audiences. These partnerships will allow for greater market penetration while working on collaboration opportunities to increase STEM awareness throughout the country.</p>
	<p>Promotional website partnerships will be developed to promote the program on various platforms. STEM-specific websites will be promoted on the program website in exchange for promotion on their websites.</p>



# Building on the shoulders of Giants!

The **STEMQuest** programme has been designed and developed specifically for STEM related content. STEMQuest uses a proven model of effective cyber learning and interactivity which has been a success in Ireland, the US and Canada.

Six years ago and the first of its kind in Ireland, **The Graduate Online Youth Quiz** was launched. The Graduate is a free on-line educational quiz for primary and post primary students and over the years it has continued to successfully engage, inform and inspire students in civics awareness. For more information on 'The Graduate', go to [www.graduate.ie](http://www.graduate.ie).

Worldwide there has been a call by industry, governments and educational agencies to find an effective means to increase student's interest in STEM and STEM careers. This elicited a response from the Graduate Online Youth Quiz. A decision was made to launch the online quiz with a much needed Science, Technology, Engineering and Maths focus. The Graduate launched in the US in early 2008.

Both the **USAGraduate.com** and **CandaGraduate.com** use the same proven concept and technology to engage, inform and inspire post primary students specifically in STEM related topics.

USAGraduate.com is currently in its third phase. The success of the Phase 1 & 2 programs conducted in Central New York in April-June 2008, and January-March 2009, indicates that young people will participate in informal STEM learning if given the opportunity. More than 25,000 students participated in these two phases. For more information go to [www.usagraduate.com](http://www.usagraduate.com) and [www.canadagraduate.com](http://www.canadagraduate.com)



[www.graduate.ie](http://www.graduate.ie)



[www.usagraduate.co](http://www.usagraduate.co)

## About the Graduate.ie

GradNet Limited operates the franchise in Ireland, 'The Graduate', [www.graduate.ie](http://www.graduate.ie).

The 'Graduate Online Youth Quiz' is a free on-line educational Quiz for primary and post primary students throughout Ireland. Many national public and private organizations and European institutions support the Quiz through sponsorship and the provision of prizes. This program, which is in its 7th year in Ireland, is focused on personal health and well-being, along with making choices that lead to a better quality of life for each participant.



The key reasons for the success of the program are:

- ✚ Incentives work - Prizes provide incentive to engage the students
- ✚ Organizations can introduce young people to their message e.g. Local Government update on new environmental initiatives, EU Commission updates new EU wide programs, Data Privacy commissioner update on privacy rights
- ✚ Compliments schools Civic, Social and Political Education (CSPE) curriculum. The program is actively promoted by the National CSPE Office in the Department of Education.
- ✚ Promotes safe use of the internet
- ✚ Absolutely no financial exposure to schools, parents or teachers



Following two years of feasibility studies, a decision was made in 2007 to proceed to a pilot phase for The Graduate in the USA. The program made its way to the US through the Sensis Corp, an engineering firm in Syracuse, NY. The Graduate (US) Inc was formed and now trades as USAGraduate.com.

We have adopted the Graduate Ireland core model. Our tagline is 'Engage, Inform, and Inspire'. We have developed an innovative on line competition to reach, engage, inform and excite young students on the STEM topics. The ultimate goal is the promotion of STEM and attracting greater numbers of young students to STEM careers.

