# 50 PEARS OF FICE SCIENTIFIC ENDEAVOUR









#### Foreword

Newcastle West Vocational School and Desmond College have a proud tradition in all aspects of scientific endeavour. Our students have and continue to strive to achieve their best, be it in their studies, on the playing field or in any of the many extra curricular activities they become involved in. This dedication is none more evident that in relation to their achievements, past and present in Science Competitions.

As the 50th anniversary of the BT Young Scientist and Technology Exhibition approached, it was agreed upon to mark the occasion with this unique publication. We hope that you enjoy reading it.





#### Disclaimer

Every reasonable effort has been made to ensure the information/data contained herein is correct, factual and up to date at the time of going to print.

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# Principal's Message

The Young Scientist Competition is one of the world's leading science and technology events and one which every student and parent in Desmond College is familiar. It is a high profile national event and one, which causes great excitement every year in our school. Young Scientist and Desmond College are linked, it is a love affair that has grown and developed into a permanent steady committed relationship – a marriage of sorts! Desmond College is well known at the Competition having achieved much success over the years and in the local community talk of the Young Scientist Competition always turns to talk of Desmond College and the projects that have been entered by the school.

Through the competition students have learned and developed skills which have served them well in later life. Look at the list of 'Where are they now?', and you will see how many budding young scientists have indeed followed their dreams. It is a Competition that brings out the very best in young people. It encourages them to think, develop, create and invent, using imagination and the many tools of research. This planning and research always takes place outside the classroom, indeed much is discussed around the kitchen table in homes all around West Limerick, and that is the beauty of this competition – it takes science out of the classroom and makes it fun, 'cool' and exciting.

Our participation in this Competition started way back in 1966 when students from the then Vocational School first entered a project. To date we have had over 100 projects accepted – a rare achievement indeed and one that would not be possible without the commitment of quality teachers. A good teacher inspires their student, encouraging them to be independent thinkers, to question, to wonder and to follow a dream. We in Desmond and in the former Vocational School were and still are blessed with such great teachers – from Eamonn O' Connell, Martin McNamara, Jim Kelleher, Connie Murphy, Richard Barry, Mike Heffernan & Mike Daly, to the many teachers in our school today working with students as I write this –

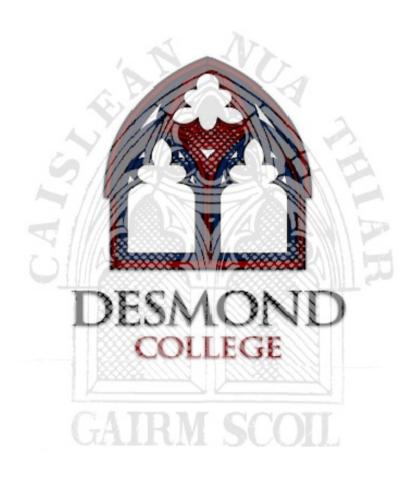
all sharing a common characteristic – they inspire their students and give them the confidence to voice and experiment with their creative ideas and visions.

This Competition highlights Desmond Colleges' commitment to Science, Technology, Engineering and Mathematics (S.T.E.M.) and has led us from our first project in 1966 to 2014 where our First Years will be studying a new short course for their Junior Certificate called S.T.E.M., a course written and designed by teachers in Desmond College. So as we look to the future I see endless possibilities. I watch our young students continue to explore and follow ideas with vigour and passion. Who knows maybe we have the new Steve Jobs or Elon Musk among us now working on some amazing new project, or maybe we have some young person who is learning the tools necessary to improve our world in ways we cannot yet imagine. With science anything is possible!

## Vourneen Gavin Barry Principal

With sincere thanks to all staff who have worked with and supported students in the Competition in recent years, especially Aoife Culhane, Orla Fahy, Caroline O'Grady, Tom Byrne, Sean Shiels, Keith O'Rahilly, Damien Culhane, Damian Carey, Heather McCarthy, Marie Ryan, Thomas O'Brien, Tara Feely, Joanne Guiry, Martin Bourke, Sean King, Michelle Liston and Liz Cregan. A special acknowledgment goes to Marie Corkery and Donal Enright who between them have mentored 57 successful projects. Their commitment and enthusiasm for the Competition has been infectious and has been of benefit to us all. We salute you! This unique publication has been compiled and coordinated by Donal Enright, a man of imagination and vision.

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# **History of the Competition**

The BT Young Scientist and Technology Exhibition (*Taispeántas na nEolaí Óga agus Teicneoilíochta*), commonly called "the Young Scientist", is an annual competition that has been held every January since 1965 in Dublin, Ireland. Currently sponsored by BT Ireland, its intention is to encourage interest in Science in secondary and primary schools.

In 1963 two UCD Physics researchers, Rev. Dr. Tom Burke and Dr. Tony Scott, came across the concept of 'Science Fairs' while conducting research in New Mexico, America. These local school science exhibitions culminated in State Fairs and ultimately a national competition. The pair decided that this type of hands-on science was something that Irish students could benefit from so they decided to take Science outside of the four walls of the classroom, this illustrated to students that Science is all around them.



Rev. Dr. Tom Burke and Dr. Tony Scott conferred with Honorary Doctorates (founders of the Young Scientist & Technology Competition and Exhibition)

And so the BT Young Scientist & Technology Exhibition was born. The first competition was held in 1965 in the Round Room of the Mansion House in Dublin and attracted 230 entries and the first ever winner, John Monaghan, has recently

retired as Chief Executive Officer of Avigen, a US Biotech company. The success of the first year was such that the exhibition moved to the much larger venue of the RDS in year two and it has remained there ever since.



R.D.S. Dublin

Early Exhibitions involved individuals competing under subjects related to the curriculum. In 1965 the categories were Biology, Chemistry, Geography – Geology, Mathematics and Physics. The entrants were divided into girls and boys both junior and senior, with no groups.

Re-categorisation came in the 1970s with new Science Syllabi. Biology in particular had a large uptake.

The Institute of Physics sponsored the first "special" awards 1981. This allowed the Science committee to build up a series of special prize sponsors in various fields. Group entries were also introduced and this enabled multi-disciplined managed projects to develop.

By 1990 the three established categories were Chemical, Physical and Mathematical; Social and Behaviourial; Biological and Ecological. Aer Lingus sponsored the competition for the first 33 years. When Aer Lingus ended its sponsorship in 2000, ESAT Telecom, which became part of BT Telecom, took over and introduced the category of Technology.

One of the founders of the Exhibition, Father Tom Burke, died in March 2008. 2010 was the tenth year in which the Exhibition was sponsored by BT. It has produced at least one author (Sarah Flannery) and one millionaire (Patrick Collison). Many of the past winners have gone on to establish international companies on the technology they developed. One of the most notable was Baltimore Technologies.



2013 Exhibition Guide







# Newcastle West Vocational School – Desmond College

Newcastle West Vocational School or the "Céard Scoil" came into existence in 1934 following the purchase of a one acre site from the Church Authorities and a payment of £100 to the Land Commission. Built at a cost of £3,900 the first Principal of the school was Mr. Eamonn O' Connell. The building had specialist Metalwork, Woodwork and Domestic Economy classrooms. Subjects were taught at elementary, intermediate and advanced levels. In the1940's the group certificate exams were introduced. In 1955 an additional building was added which included two practical rooms and two general classrooms with a heated cloakroom.

As pupil numbers increased over the years additional buildings were added such as the New Science Room in 1969. Eventually the student population outgrew the schools ability to maintain and renovate existing buildings, so work began on the building of a new school in June 2000, which was fully completed by September 2001 under the stewardship of the then principal, Mr. Richard Barry.

Desmond College, as it became known was originally built for 400 pupils. As numbers increased, additional class rooms were added in 2010. Ms. Vourneen Gavin Barry is the current Principal of this very busy school with over 550 students.

#### **Our Schools Involvement**

Following the launch of the competition in 1965, Mr. Eamonn O' Connell Principal of the Vocational School, Newcastle West, entered two projects in 1966. We were the second vocational school in Ireland to have a project entered and the first from Limerick

Mr. O' Connell's educational philosophy was that "An Education for Life", he encouraged the students to enter this newly established exhibition and later encouraged other teachers to do the same

A glance at the titles of the initial projects are a reflection off the interests of both the students, the community and the teachers of the time, so it was no surprise to see projects dedicated to rural issues, declining populations and parochial concerns, as well as agricultural based investigations.

The 1970's saw a shift in the pattern and type of project when Martin McNamara and Jim Kelleher mentored student projects.

In the late 1970's, the other teachers who were to prove influential to students were Connie Murphy, Richard Barry and Mike Healy who gave up their lunch times and assisted students after school. It is worth noting at this point, that this was a time when all the charts, posters and displays were put together by hand. The school had one set of stencils that were used to put a "professional" look to the displays; any error meant the whole display had to be redone.

One of the first students that Mike Healy assisted was Michael Daly from Kilcolman. Michael entered projects initially as part of a group and as an individual in 1979 and 1980. Having qualified as a teacher, Michael acted as mentor to Young Scientists in 1989 and 1990 in Newcastle West Vocational School, he later went on to mentor projects in Shanagolden and Askeaton Vocational Schools.

Entering projects in the Young Scientist takes considerable effort, primarily from the students involved, but also from their parents, peers and school. A whole school approach is often to be seen in the final efforts of the students, be it in taking questionnaires, completing forms or acting as control groups. In Desmond College, we are fortunate to have subject departments like Art, Engineering and Construction who will ensure that each and every project/ student achieves its potential.

The historical evidence would suggest that this is a practice that co-existed in the Vocational school. The efforts of Martin, Jim, Connie and Richard were often supplemented by Mike Heffernan, just as Tom Byrne, Keith O' Rahilly, Sean Shiels, Damien Culhane, Heather McCarthy, Orla Fahey, Marie Corkery and Donal Enright do to this very day.

Another aspect of the success of this competition has been the willingness of trainee science students to get involved. Michelle Liston, a former student and Young Scientist in 2008, came back as part of her University Degree and helped mentor the record-breaking amount of entries the school had in 2013, just as Tara Feely is doing in 2014.

On the 50<sup>th</sup> Anniversary of the competition, it is great to have new teachers like Marie Ryan (Mathematics), Caroline O'

Grady (Science) and Aoife Culhane (Science) all willing to give up their free time to help students achieve their potential. It is a testament to the proud tradition that continues to grow and develop.



# Reflection on the Young Scientist Competition by McNamara family

For ten years (1973 - 1983), no sooner had the McNamara household waved goodbye to the last group of wandering wren boys, our thoughts would automatically turn to the preparations for the Young Scientist Exhibition, held annually at the RDS Dublin towards the end of December. My late husband Martin (R.I.P.) would be on the phone to the other participating teachers cross checking that all the experiments were finalised, the reports were written up, exhibiting posters were ready and of course, the students were fully briefed. Travel arrangements were made and departure, was usually from the Vocational School Newcastle West at an ungodly hour in the morning. The accompanying teachers volunteered to drive all and sundry to Dublin using their own cars.

That evening and the following day we would be glued to our radio and T.V. sets eagerly awaiting news from the RDS. They highlighted exhibitions from schools but not a word about the Newcastle West School! The late evening news gave an account of the overall winners but we had to wait until the arrival of the following day's newspaper to see if the students had won prizes in the various categories. I am proud to say that every year for those ten years they won a prize and/or were highly commended. It was a great achievement for a small rural vocational school and all concerned should be very proud of that success.

All the experiments were very interesting but the one we readily recall is the one in 1972 conducted by the late Thomas Quaid (R.I.P.). He posed a question "Is alcoholism inherited or not?" To find out the answer he gave alcohol to four chickens, one chicken was on brandy, one on whiskey, one on

stout and one on beer. The result was inconclusive but the over consumption was not good for our feathered friends!

When they arrived at the RDS exhibition hall they were on a "high" and kicked up a loud crowing racket, which they maintained for the three days. Naturally enough they stole the show and won Thomas (R.I.P) second prize in the senior section. They even made it to the National press (Sunday Press, June 3<sup>rd</sup> 1973). Even then the "politically correct" killjoy forces were showing their teeth and succeeded in stopping any further experiments on this worthwhile and socially necessary project.

Since then the Newcastle West Vocational School and later the Desmond College have kept up the tradition of entering projects for the Exhibition. Meanwhile the Young Scientist Exhibition has gone from strength to strength with most of the country's schools and colleges vying for places. It is with great pleasure and pride that we note that many of these projects have won prizes but as always it is the research, participation and cooperation between the students and teachers that was and is such a vital ingredient to success. Science has been the winner but so too have been the positive benefits for the students, teachers and the College.

Congratulations to all concerned and may the next 50 years be as fruitful as the first 50 years.

Eilish, Christina, Tommie & Aine McNamara

# The Importance of Computers

"The following article was written in 1984 by Jim Kelleher, as he looked forward to a future dominated by computers and technology."

#### Jim Kelleher 1984

There have been enormous advances in scientific technology in recent years. Today, we live in an age of automation. We are faced on every side by machines whose functions are to lessen the workload of those who operate them. Machines have always been built with this idea in mind, but today they are changing much more rapidly. Now machines are part of our everyday life and we have come to accept them as part of our human existence. However, today, machines have become much more functional and complicated than hitherto or so we like to think. The electronic computer of today is no more a mystery than the abacus was some 2,000 years ago.

In Ireland, we like to think that we are advancing in the

computer age now, but we are already some thirty or more years behind other parts of the world. Computers have been infiltrating our homes in many different guises. It may be the automatic washing machine, the tumble-dryer, the micro-wave oven, the dishwasher, the automatic food-mixer, etc. In the world of entertainment the stereo, the TV, etc.—the list is endless—and in the world of motoring, it would be unusual today to find a car without some electronic components. But it is in the world of business that computers have come to be a complete asset. By the speed, accuracy, efficiency and reliability with which they can operate, one computer can take the place of many workers. In finance. communications, transport, government and police activities, computers have helped enormously in the speed at which transactions can be performed. In the United States and other parts of the world, the space exploration programmes depend totally on the computer and its ability to

instantaneously react to the unknown In Ireland, the pocket calculator, the cash register in the local supermarket, the scanning machine in the hospital all are part of our daily life. We have come to depend on them. In many offices now the computer calculates the wages and even prints the cheques. In some bakeries computers are used to perfect the blend of dough mixture. In the cement factories computers check the correct mixture in the cement, and so on. The computers of today are amazing and no doubt the computers of the future will be much more fascinating. However, there is one computer that will never be surpassed, and that is the human brain. The electronic computer is dependent on the human brain for all its instructions. It is only as good as its operator and it awaits further instructions once its operation is complete. The development of computers has led to a change in job opportunities.

Many of the jobs available

for the past years in factories

etc. are no longer in existence—they have been replaced by modern technology—but this modern technology is itself creating new jobs. The jobs of the future are going to be as users and manufacturers of this technology. Unfortunately the educational system is slow to change and our present system is designed basically with the current employment opportunities in mind. However, as the current employment is changing so too our educational system must chance to cope with this technology. At present, there are little guarantees that the job a student has in mind now will still exist when he/she leaves school—hence the need for change. We will need to be able to meet the challenge and use technology to further our interests. It is envisaged that in the 1990's all a person will need to know on a particular topic will be obtained by sitting in front of his TV screen and plugging in a cartridge or some manipulation of the keyboard of his home minicomputer. Hence the need to be able to use the minicomputer to the full. If we can read the changing employment trends correctly, then it would seem that we must make sure our children are educated in the use of this modern technology. We must ensure that what employment opportunities will be available in the manufacturing and operation of this technological equipment are open to our children.

To everybody we say—"Happy Computing".

(Article taken from "Newcastle West Vocational School 1934-1984 FAS")





Computer Science, 1984

Photo: MCB Studio. Newcastle West

# Renewable Energy (Then and Now) by Michael Daly

Renewable energy is a theme, which has been investigated, in a number of Desmond College Young Scientist projects over the years. The vision of three students Keith Massey, Seamus Carmody and Michael Quaid in 1989 became a reality over 20 years later in a local village in Kilcolman.

During the Autumn of 1988 the boys recorded wind speed and direction data through use of an anemometer and wind vane at a chicken farm in Kilcolman and discovered that there was a natural wind funnel. Their project demonstrated that the chicken house could be run profitably with the erection of a wind turbine in conjunction with a storage facility of batteries for emergency situations. Unfortunately the farmer involved was unwilling to risk failure at that particular time and the project and its findings were shelved. We now move forward to the mid 2000's to an adjoining chicken farm in Kilcolman and the return from America of one son with modern farming and technology ideas. His vision has resulted in the erection of two wind turbines at almost the same testing site of 1989. These wind turbines in 2013, twenty four years later now run a modern farm consisting of three chicken houses and a dairy herd as well as supplying electricity to the national grid.

# Use of technology

The projects of this era in the 1990s were completed without Internet, Microsoft, PowerPoint, Laptops or Printers. Research was carried out through library books or letters to relevant companies. All data was hand written in folders. Graphs were manually drawn and coloured with pencils or markers. A drawing board and tee square was used to set up a display sheet and main points were printed letter by letter with a plastic stencil, which had to be cleaned regularly to prevent smudging of the marker on the sheet. Many strong words were spoken when spelling mistakes were made in those days as there was no Tippex to rectify mistakes and the sheet would have to be started

again. Pictures were taken on roll of film and developed for glueing into place.

Amazing how technology has changed in such a short time period!

# Michael Daly



Winning team at the R.D.S. Young Scientists exhibition in Dublin. Seamus Carmody, Michael Quaid, Keith Massey with Michael Daly, Teacher.



Michael Daly (15) student – shown here talking to his classmates

#### 1960's

#### 1965

Inaugural Year – No project submitted

#### 1966

David Geary, Junior Boys Biological Science – "Milk & milk products: Home manufacture of the products from butter to calsin plastics. To show the scientific basis for the manufacture of the products and quality control of milk." Teacher: Eamonn O' Connell

Sean Flynn, Junior Boys Geography – "An atlas of a rural parish. A regional survey of a rural parish showing its value as a medium of pure research and educational, and as a base for rural planning and development"

Teacher: Eamonn O' Connell

#### 1967

Joan Nolan, Senior Girls Geography – "The historical geography of Newcastle West" **Teacher**: Eamonn O' Connell Denis Bucke, Junior
Biological Science – "The effect of different diets on small animals to show the value of milk and milk products and to illustrate the effects of low protein and vitamin deficient diets".

Teacher: Eamonn O' Connell

Teacher: Eamonn O' Connell

1st Category

Michael Cregan, Senior Boys Geography - "The historical geography of a declining village". Teacher: Eamonn O' Connell

#### 1968

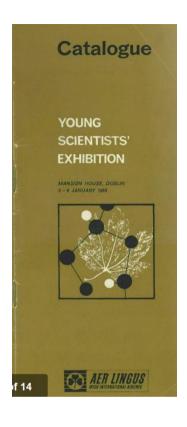
Michael Joseph Lynch, Junior Boys Geography – "Geography and parish planning, showing the influence of geographical factors on the development of a parish and on planning future development."

Teacher: Eamonn O' Connell

Denis Bucke, Senior Boys Geography - "An agricultural atlas of the Broadford Parish showing, in particular, the relationship between land use and soil types" Teacher: Eamonn O' Connell Mary Shine, Junior Mathematical- "Project Title unknown" Newcastle West Vocational School, Limerick Teacher: Eamonn O' Connell 3<sup>rd</sup> Category

# 1969

Joseph Mullins, Junior Boys Geography – "To show the relationship physical features, land use and socio-economic development in Co. Limerick." Teacher: Eamonn O' Connell



## 1970's

#### 1970

No project submitted

# 1971 Missing Data

#### 1972

Thomas Quaid, Junior Biochemistry – "Smoking and Cancer." Teacher: Martin McNamara 1st Category



Martin McNamara with Thomas Ouaid & Jeremiah Nolan 1972

Jeremiah Nolan, Junior Biological – Seasonal "Productivity in Grasses." Teacher: James Kelleher 2<sup>nd</sup> Category

#### 1973

James Anglim, Junior Biochemistry – "An investigation into the production of potatoes using different manure" **Teacher**: Martin McNamara

Thomas Quaid, Senior Biochemistry – "Is Alcoholism Inherited or Not?" Teacher: Martin McNamara 2nd Category

#### 1974

James Anglim, Senior Biochemistry – "A study of some common plants and animals as they occur in different soil types." Teacher: Martin McNamara Highly Commended

Edward Mullane, Junior Biochemistry – "To observe the effect of different diets on rabbits." Teacher: Martin McNamara 1st Category



Professor Patrick Lynch & David Kennedy Aer Lingus with Richie Ryan TD & (Edward (Eddie) Mullane) 1974

William J. Wrenne, Senior Geography & Geology- "An agricultural atlas of the Republic of Ireland." Teacher: James Kelleher **Highly Commended** 

#### 1975

James Anglim, Senior Biochemistry - "An investigation into the milking characteristics of cows." Teacher: Martin McNamara

**Highly Commended** 



Martin McNamara with Science Students

William J. Wrenne, Senior Chemistry- "A study of silage effluent." Teacher: James Kelleher 2<sup>nd</sup> Category

Laurence Clarson, Junior Geography & Geology-"Intensive dairying versus intensive beef production in Dromcollogher by comparison with EEC countries." Teacher: James Kelleher 3<sup>rd</sup> Category & Best Presentation

Geography and Geology (Junior)
—First prize (£50), Paul N.
Heenan, Waterpark College, Waterford; 2 (£35), Fergil J. Colohan,
Colaiste Damhnait, Achill Sound,
Co. Mayo; 3 (£25), Laurence Clarson
Vocational School, Newcastlewest, Co. Limerick, Best presentation (£10)—Laurence Clarson,
Vocational School, Newcastlewest,
Co. Limerick Co. Limerick.

(Irish Times – Laurence Clarson) 1975

#### 1976

James Anglim, Senior Biochemistry & Physiology -"To investigate the possibility of a 3 minute mile." Teacher: James Kelleher Joint 1st Category

Pat Hennessy, Senior Biochemistry & Physiology-"An investigation into the external factors affecting the anterior pituitary hormone." Teacher: Martin McNamara

#### 1977

Tom McCarthy, Junior Biological Sciences - "To investigate some of the factors affecting photosynthesis." Teacher: Martin McNamara **Highly Commended** 

Michael P. O'Connor, Intermediate Physical & Mathematical - "Mathematics for house design." Teacher: James Kelleher

Benjamin Curtin, Billy Sexton, Denis Roche & Kevin Barrett, Intermediate Group Project— "Socioeconomic effects of Castlemahon Co-operative Poultry Products Ltd." Teacher: Con Murphy Highly Commended

#### 1978

John Quaid, Junior
Biological Sciences – "An
ecological study of the
Glenstar waterfall area."
Teacher: Con Murphy 2<sup>nd</sup>
Category

Eamonn Walshe, Junior Physical & Mathematical Sciences – "Comparison of engine performance". Teacher: James Kelleher

**Highly Commended** 

Tom McCarthy, Intermediate Biological Sciences – "An investigation into some of the effects of anti-biotics." Teacher: Martin McNamara

Gerard Keogh, Michael Daly, Michael Cunningham & Raymond Moroney Group Project – "Future development of Newcastle

# West" **Teacher:** Mike Healy **Highly Commended**



([R]Tom Mulcahy, Michael Daly, Michael Cunningham, Gerard Keogh [F] Eamonn Walsh, John Quaid & Raymond Moroney) 1978

#### 1979

John Liston, Intermediate Biological – "A progression toward modern dairy farming." Teacher: Martin McNamara

# Thomas McCarthy,

Intermediate Biological
Sciences – "Fuel for the
future - Using our excess food
products." Teacher: James
Kelleher



(Thomas McCarthy, Michael Daly, John Liston & John Quaid) 1978

Michael Daly, Intermediate Environmental & Social Sciences – "A survey on the effects of EEC policies on the rural population of West Limerick." **Teacher:** Mike Healy

John Quaid, Intermediate Environmental & Social Sciences – "Some Factors affecting natural vegetation and production". Teacher: Con Murphy Joint 3<sup>rd</sup> Category





#### 1980's

#### 1980

#### Michael Walshe,

Intermediate Biological
Sciences – "To observe the
effect of food on cells."
Teacher: Martin McNamara

Michael Daly, Intermediate Mathematical, Physical &

Applied Sciences – "What are the car fuels of the future."

Teacher: James Kelleher

#### Patrick Broderick,

Intermediate Environmental & Social Sciences – "Water divining - Fact or fiction." **Teacher:** Con Murphy

#### 1981

William Mulcahy, Junior Biological Sciences – "To Investigate the Diet of Rabbits." Teacher: Martin McNamara

Patrick A. Broderick, Senior Biological Sciences – "To Investigate Antibiotic Residues in Some Foods." Teacher: Cornelius Murphy Highly Commended

Gerard Scully, Junior Environmental & Social

Sciences – "An investigation into Systems of Land Drainage." **Teacher:** James Kelleher

## Michael Walshe,

Intermediate Environmental & Social Sciences – "Life Styles and Social Patterns V Occupation and Income."

Teacher: Martin McNamara

Sheila O'Dwyer, Intermediate Environmental & Social Sciences – "Social Opportunities for Teenagers" Teacher: Risteard De Barra

#### 1982

Patrick A. Broderick, Senior Biological Sciences – "Antibiotic Residue in Some Foods" Teacher: Con Murphy Highly Commended



(Patrick Broderick) 1982

#### Michael Walshe,

Intermediate Biological Sciences – "Products Which May affect Blood". **Teacher:** Martin McNamara



(Michael Walshe) 1982



(Gerard Scully) 1982

Gerard Scully, Intermediate Mathematical & Physical Sciences – "Is Fibreglass an Effective Insulator."

Teacher: James Kelleher

#### 1983

Michael Heffernan, Junior Mathematical, Physical & Applied Sciences – "Electric Bicycle worked on Car Battery". Teacher: Mike Heffernan



(Mike Heffernan Jnr) 1983

# William Colbert,

Intermediate Mathematical, Physical & Applied Sciences – "Waste Paper Briquettes -Cheap Fuel?"

Teacher: Martin McNamara

# Michael Mulcahy,

Intermediate Environmental & Social Sciences "Retirement in Newcastle West."

**Teacher:** Con Murphy **Sociological Association of Ireland Award** 

Liam O' Brien, Intermediate Environmental & Social Sciences – "An Attempt to Make a Parish Self Sufficient". Teacher: James Kelleher

#### 1984

# William Colbert,

Intermediate Environmental & Social Sciences – "The local CO-OP and its Effect on the Parish". **Teacher:** James Kelleher

## Michael Mulcahy,

Intermediate Environmental & Social Sciences – "Small Industry in West Limerick".

Teacher: Con Murphy Joint 3<sup>rd</sup> Category & Sociological Association of Ireland

Award



(Mike Mulcahy & Liam Colbert) 1984

1985 – 1988 No Projects submitted

#### 1989

Seamus Carmody, Michael
Quaid & Keith Massey Intermediate Group
Environmental & Social
Sciences – "The Feasibility of
Wind Powered Chicken
Houses in West Limerick"
Teacher: Michael Daly 1st

Category & Solar Energy Society of Ireland Award



(Seamus Carmody, Michael Quaid & Keith Massey with Minister for Energy Michael Smith) 1989

# 1990's

#### 1990

# Keith Massey, Seamus Carmody & Michael Quaid

- Intermediate Group
Environmental & Social
Sciences – "Metallic
Poisoning and its Effects on a
Local Community" Teacher:
Michael Daly Highly
Commended



(Keith Massey, Seamus Carmody & Michael Quaid) 1990

1991 – 1999 No Projects Submitted

#### 2000's

#### 2000 - 2004

No Projects Submitted

#### 2005

Claire Conaghan, Aine Mulcahy & Sean Liston, Senior Group Technology – "Intelligent Cats eyes" -Teacher: Donal Enright Overall Group Runner Up

& Patent Award



(Aine Mulcahy, Claire Conaghan & Sean Liston) 2005

#### 2006

Kate Magner, Kathy Herbert & Sarah Reidy, Senior Group Technology –

"ABCD A Baby Care Device"
- Teacher: Donal Enright 3<sup>rd</sup>
Category

#### 2007

Catherine Upton, Barbara McMahon & Dermot Considine, Senior Group Technology – "A Wireless Vehicle Signal Operating System" - Teacher: Donal Enright 3rd Category



(Barbara McMahon, Kate Magner, Dermot Considine, Emma Hayes & Alicia Magner) 2007

Kate Magner, Senior Biological Ecological – "Hydrophobic properties of Nelumbo Nucifera" -Teacher: Donal Enright

# Alicia Magner & Emma Hayes, Junior Group Technology – "Economy Class Syndrome – A Solution" - Teacher: Donal Enright

#### 2008

Michelle Liston, James Hunt & Gerard Moran, Senior Group Technology – "A Chewing Gum Removal Device" - Teacher: Donal Enright 3<sup>rd</sup> Category



(Michelle Liston, Thomas Moran & James Hunt) 2008

Gemma Bucke & Grainne
Bucke, Junior Group
Technology – "Hypoglycemia
Alert Device" - Teacher:
Donal Enright Highly
Commended



(Gemma & Grainne Bucke) 2008

#### 2009

**Shauna Upton,** Senior Individual Technology – "Tendon Contracture

Rectification Device" -Teacher: Donal Enright Highly Commended

Emer Murphy, Junior Individual Biological – "Milk Quality of Different Breeds of Cattle" - Teacher: Marie Corkery Display Award

Kate Brislane, Katy Hurley & Mairead Relihan, Junior Group Technology – "Fuel Identification & Alert Device" Teacher: Donal Enright Highly Commended



(Mairead Relihan, Kate Brislane & Katy Hurley) 2009

Kevin Brosnan, Ian Mackessy & Alicia Magner, Senior Group Technology – "Everlasting LED Lights" -Teacher: Donal Enright Display Award

# 2010 - 2013

#### 2010

Rose Magner, Eileen Flynn & Laura Herlihy, Junior Group Biological – "Alternative to Plastic Silage Wrap" Teacher: Donal Enright Highly Commended



(Eileen O Flynn, Laura Herlihy, Rose Magner, Joanne Dowling, Aine Baer, Kieran Harnett & Michael Upton) 2010

Joanne Dowling & Aine Baer, Senior Group Mathematical Physical – "The Marangoni Effect" - Teacher: Marie Corkery

Kieran Harnett & Michael Upton, Junior Group Technology – "Eliminate the Hazzards of Window Blinds" -Teacher: Donal Enright 3<sup>rd</sup> Category

#### 2011

David Upton & Darragh McMahon, Junior Group Technology – "The Alchemiser"- Teacher: Marie Corkery Highly Commended

Edel Copse & Sarah Enright, Intermediate Group Biological "Preventing Enamel Erosion" - Teacher: Marie Corkery

Tom Flavin, John Delee & Christopher Scannell, Junior Group Technology – "The Wellie Washer" - Teacher: Donal Enright



(Chris Scannell, Tom Flavin, John Delee with Bryan Dobson) 2011

#### 2012



(Celebrating Students at Awards Ceremony) 2012

Rose Magner, Lisa Barrow & Laura O' Mahony, Senior Group Mathematical Physical-"Herba Fermentato"

Teacher: Donal Enright Display Award

Michael Upton & Cieran Scanlon, Senior Group Technology – "Self Sanitising Handle" - Teacher: Donal Enright Display Award



(Michael Upton, Ryan Tubridy & Cieran Scanlon) 2012

Kate Brislane & Louise Copse, Senior Group

Biological- "Soft Shell Eggs -A Solution" - **Teacher**: Donal Enright

**Highly Commended** 

Tom Flavin, John Delee & Christopher Scannell, Intermediate Group Technology – "Hygiene & Bio Security" - Teacher: Marie Corkery

James O' Connor, Junior Individual Technology – "You've Got Mail!" -Teacher: Donal Enright

Sean Duffy & Warren
Gleeson, Junior Group
Technology – "InVigil8" Personal Security Device Teacher: Donal Enright 1st
Category & Analog Travel
Award



(Warren Gleeson & Sean Duffy) 2012

Connor Barry, Martin Madden & A.J. O' Connor, Intermediate Group Technology – "Calving Jack Attachment" - Teacher: Marie Corkery Display Award

Orlaith Condon & Nikita
Derwin, Intermediate Group
Biological – "Body
Temperature & Time of Day"
- Teacher: Marie Corkery

Shauna Gayer & Eileen O' Flynn, Intermediate Group Biological – "Control of Wasps Using Natural Products" - Teacher: Donal Enright

Mark Danagher & Ciaran Nolan, Intermediate Group Technology – "Chimney Turbine" - Teacher: Marie Corkery

Sinead Nix & Lorna
Browne, Intermediate Group
Biological – "Calling it
Quits" - Teacher: Marie
Corkery

Jack Fanning, Liam Upton & Shane Lee, Junior Group Biological – "Urine Fertiliser" - Teacher: Marie Corkery

Eoghan McMahon, Michael O' Flynn & John Byrnes,

Junior Group Technology – "Safe Storage of Slurry" - **Teacher:** Marie Corkery **Display Award** 



(Eoghan McMahon, John Byrnes & Michael O' Flynn) 2012

#### 2013



(39 Students, 16 Projects & 5 Awards) 2013

Shauna Tobin & Cormac Long, Senior Group Technology – "Self Regulating Speed Ramps" -Teacher: Donal Enright

Cian Cremin & Seamus Hurley, Junior Group Technology - Heavy Duty Hover Craft - Teacher: Donal **Enright Highly Commended** 

## Claire Collum, Debbie Murphy & Shauna Hough, Intermediate Group

Technology - "Camogie/ Hurling Trainer" - Teacher: **Donal Enright** 

## Lisa Barrow & Orlaith Condon, Senior Group

Biological - "An Investigation into the Lifecycle and Intelligence of Crows" -

Teacher: Donal Enright

**Display Award** 



(Orlaith Condon & Lisa Barrow) 2013

## Martin Madden, Conor Barry & Peter Shanahan,

Senior Group Technology -"Self Leveling Wheelbarrow"

- Teacher: Donal Enright **Highly Commended & Display Award** 



(Martin Madden, Peter Shanahan & Connor Barry) 2013

## Emma Herbert & Eamonn **Browne.** Junior Group Technology - "Omni-

Directional Battery Holder" -Teacher: Donal Enright

Emily Duffy, Junior Individual Mathematical Physical- "Mirror, Mirror What colour are you?" -Teacher: Donal Enright

## Liam Dowling, Graham McCov and Darren Kelly,

Junior Group Technology -"A Coolant Helmet Insert"-Teacher: Marie Corkery



(Darren Kelly, Graham McCoy & Liam Dowling with Máire Geoghegan-Quinn European Commissioner for Innovation & Science) 2013

Simon Geaney & Colin Craker, Intermediate Group Technology – "Auto Safety Device" - Teacher: Marie Corkery

Sean McElligott & Jack O' Connor, Junior Group Technology – "Hydro Cart"-Teacher: Marie Corkery

Diarmuid Curtin, Alan Curtin & Conor Leahy, Junior Group Technology – "An Enhanced Walking Aid for the Blind"- Teacher: Marie Corkery

Steven Brosnan, Tara Geary & Courtney Singh,
Intermediate Group
Technology – "A Scent
Clock" - Teacher: Marie
Corkery

Sophie Bridgeman, Fiona Barrow & Caoimhe Danagher, Junior Group Technology – "Key Glow"-Teacher: Marie Corkery Highly Commended



(Sophie Bridgeman, Fiona Barrow & Caoimhe Danagher) 2013

Brian Harnett, Christian White & Patrick Moriarty, Junior Group Technology – "Enhanced Sound Proof Ear Muffs"- Teacher: Marie Corkery

Nikita Harnett, Danielle O' Connor & Claire Normoyle, Junior Group Behavioral -"Sports = Achievement?" Teacher: Marie Corkery

Chris Scannell & Declan O'
Connor, Intermediate Group
Biological – "An innovative
water collection method
inspired by the Stenocara
Beetle" - Teacher: Marie
Corkery

#### 2014

Sean Duffy & Warren Gleeson, Senior Technology Group— "A method of deterring/ detecting the tampering of drinks." Teacher: Donal Enright

Shauna Tobin & Steven Brosnan, Senior Technology Group – "The Bi-Cycle for Life – Water Filtration/ Transportation Device." Teacher: Donal Enright

**Emily Duffy,** Individual Junior Mathematical Physical – "Pop: The Science of Bubbles". **Teacher**: Donal Enright

Kiara Carroll, Clara Danaher & Terri Keane, Senior Mathematical Physical Group— "Forge water as a treatment for cutaneous warts". Teacher: Donal Enright

Liam Upton, Shane Lee & Padraig Dore, Intermediate Technology Group – "An udder alarm". Teacher: Marie Corkery

Aoife King, Individual Senior Mathematical Physical – "Mayan Mathematics - So right yet so wrong". Teacher: Donal Enright

Shannon Naughton, Sarah O' Grady & Aoife Larkin, Junior Technology Group – "Directed Eye Dropper". Teacher: Donal Enright

Seamus Hurley & Cian Cremin, Intermediate Technology Group – "Eco Friendly Planter". Teacher: Donal Enright

Julie Cantillon & Stephanie Sheehan Intermediate Biological Group— "Sun Stalking Sunflowers". Teacher: Aoife Culhane

Niamh Liston & Hannah Barrett Junior Behavioral Group— "Drivers attitudes toward speed detection signs". Teacher: Aoife Culhane

## Down Memory Lane by James (Jim) Anglim

I joined the "Tech" or Newcastle West Vocational School as it was officially called in 1972. As a first year, I was acutely aware of the importance in which science played in the school at the time. In the year ahead of me was Tommy Quaid (R.I.P.) who had entered a project that year. Coming from Monagea, West Limerick, a community that back then had more chickens than population, it was no surprise that a lot of the school projects involved poultry or were of the agricultural variety. Perhaps because of this, or maybe it had to do with the idea of exposing chickens to copious amounts of smoke that year or alcohol the following year that I initially became involved. Looking back I firmly believe that it had more to do with the encouragement of Martin McNamara.

I did my Group Certificate in 1973 and my Inter (Intermediate) Cert in 1974. We were the first class that studied to complete the Leaving Certificate in the history of the school. Several girls from the local convent joined a group of us boys, where the option of continuing to a Leaving Certificate was not an option. The class increased to eleven when one student from Rathkeale and another from Dromcollecher joined us. If memory serves me, the class was made up of the following students: Nora Lawlor, Eileen McAuliffe, Breda Geoghegan, Joan Maloney, Pat Donavan, John Markey, Liam Wrenne, Tom McCarthy, Liam Murphy and Timmy Hayes. In those days we didn't have a school uniform.

My first entry to the Young Scientist was in 1973 and I subsequently entered on four consecutive occasions, culminating with a joint first in my category in 1976. My prize was a crisp £5 note. I have vivid memories of sitting on a bale of hay in the back of Jim Kelleher's van on our way to Dublin. I still remember the petrol fumes that emanated from the 5 gallon drum of petrol we carried to Dublin during the 1974 petrol crises.

I was the first student from Newcastle West Vocational School to continue to third level education, where having qualified and gained work experience I took up a position in Aughinish Alumina. I maintained an interest in science and I am planning to visit the exhibition in 2014. I follow the exploits of the current students via their appearances in local media and television.



Jim Anglim's Momentos



# 1978 Project "Future Development of Newcastle West" by Michael Healy

Students: Gerard Keogh, Michael Daly, John Cunningham & Raymond Moroney

All the rules changed on the last school day of December. The school yard had an unreal, unfamiliar, eerie quality, as it was the noman's land between the world of hilarity and the world of industry. The double pre-fab at the back gate had been transformed by Pat O'Connor for the Christmas Party which had evolved into a combination of music-hall, disco and circus as the hours progressed. In stark contrast to this boisterous exuberance, the science rooms on the other side of the yard exuded a sober, calm, intellectual atmosphere, as the young scientists put the finishing touches to their projects.

My first introduction to the world of scientific experiment was as a guinea-pig for Martin's (Mac) study on the effect of nicotine on the quality of the blood. The project was aborted, as the blood was not stored correctly. However, I felt proud, as I had shed my blood for the school! Martin's enthusiasm was infectious and I was hooked. Jim (Kelleher) and Connie (Murphy) were old hands at the Young Scientist and they convinced me to have a go.

But I had a logistical problem. Irene Ryan and Padraig Collery had dumped the entertainment portfolio onto me in 1973 with the result that the school tours and the Christmas Party were my responsibility. How then, could I prepare for the Christmas Concert and simultaneously supervise a group for the Young Scientist Exhibition? I found that they were not mutually exclusive. So in 1977, my four Young Scientists, Gerard Keogh, Michael Daly, John

Cunningham and Raymond Moroney, set out to project a future for the development of Newcastle West. This was done in the company of Stand-up Comics, Bodhran Players and Fiddlers and they were all winners!

Work for the Christmas show started after the Halloween Break as the innate talents of the students had become apparent and they were now ready "To strut their hour upon the stage" and "bestride the world like a colossus". Lunchtime and Saturday mornings had an earnestness as our young stars shone and their personalities blossomed. All our spare hours were spent writing, laughing, drawing, cursing, concentrating and hoping that things would be fine on the day. Somewhere along the way, I stopped being "Sir" and became "Mike". On one surreal Saturday, Room 14 contained six (F.C.A.) uniformed 3<sup>rd</sup> years preparing for a Dad's Army sketch, four young scientists in Jerseys coming from football training, two juvenile Fiddle Players from Ardagh and assorted others who formed an audience and commented on the merits of all contestants.

In 1977, the school was small enough for each student to feel that he or she represented the school in sports, as a young scientist or as a musician. The Young Scientists represented their fellow students and all students felt a degree of ownership and pride in the finished project. Many of young scientists went on to teach and continue the tradition (i.e. Mike Daly, Sheila O' Dwyer, Mike Flynn, Noel O' Grady etc.). At that Christmas Party in 1977, Gerard Keogh played Irish music with wild abandon, only after he had perfected the maps for the project! All the girls wanted to dance with John Cunningham but he still had time to list his detailed conclusions. Mike Daly became a new man and we worked together the following year on another project. After his five minutes on stage, Raymond Moroney thought he had a theatrical future, but he still had the discipline to finish his part of the project.

These four boys had worked tirelessly at collecting data and collating statistics and in the process created a blueprint for the town of Newcastle West which proved amazingly prophetic. They were proud of their work and I was very proud of them. Their project was awarded "Highly Commended". However, we entered the same project in the Bank of Ireland National Economic Competition and it came in 1<sup>st</sup> place in the Junior Section. So the boys had a second weekend in Dublin for the Award Ceremonies.

So all the hard work paid off.



**Michael Healy** 

### **Observations**

As testament to its longevity, the Young Scientist competition has evolved from its beginnings in 1965 to become the largest competition of its kind in Europe. The categories have changed in an effort to more accurately reflect the prominent roles Technology and Mathematics play in our economy. The numbers entering each year have increased to the point where nearly three out of every four projects will **not** be accepted. Girls compete on an equal footing with their male counterparts.

Looking back at the early exhibition guides highlight some interesting facts. Gone are directions as to where the students can find a payphone. Gone too is the fact that students no longer use their second name in their applications. The competition has become reflective of changes in the educational system, like the increase in lay teachers. Earlier years had projects mentored by teachers with **Sr. Br.** or **Fr.** preceding their names, thus reflecting the dominance of the Religious community in education.

The schools entering have also undergone transformations, just as Newcastle West Vocational School morphed into Desmond College, most of the other vocational schools have had name changes, while some of the schools involved in the early years like Mount Trenshard, Foynes have ceased to operate.

The exhibition guides accurately mirror economic changes. Gone are the free exhibition guides in the initial years as the price went from 10p in the decimal era to its current price of  $\[mathebox{\ensuremath{\mathfrak{C}}}\]$ 2. Similar reflections are to be seen in the prize money, with winning projects receiving  $\[mathebox{\ensuremath{\mathfrak{C}}}\]$ 5000 and opportunities for travel to USA, in contrast to £1150 in 1968, which was divided between the winning entries.

Whilst the competition has increased in size and popularity over the years, perhaps one of the biggest changes has been in communication surrounding the event. Opening and closing

ceremonies are broadcast live with the media publishing photographs and interviews with the students on a daily basis.

Despite the changes, some aspects remain the same, like the detailed judging carried out by Ireland's top industry and scientific academics and the work and commitment by each and every student involved.

The depth of knowledge and amount of work undertaken is evident to all who visit the exhibition annually and it has become the norm for previous students to visit the RDS to rekindle their own experiences. During the second week in January each year, texts and emails are received by the school, wishing the current group of students well in the days ahead.

Observations (Newcastle West Vocational School & Desmond College)

- Longest title of any of our projects: David Geary, "Milk & milk products: Home manufacture of the products from butter to calsin plastics. To show the scientific basis for the manufacture of the products and quality control of milk."
- Past student James Anglim successfully entered in 1973, 1974, 1975 & 1976 holds the record for most entries from our school.
- Michael Walshe has successfully entered in 1980, 1981 & 1982
- Chris Scannell has successfully entered in 2011, 2012 & 2013

### Family links:

- Denis Bucke (1968) is a granduncle to Gemma and Grainne who took part in 2008.
- Sean Liston in (2005) & Michelle Liston (2008) are the children of John who entered in (1979)
- Michael Daly who entered in (1979 & 1980) as a student, assisted students in (1989 & 1990) as a teacher. Michael went on to assist students in Shanagolden and Askeaton Vocational schools.
- Nikita Harnett (2013) is the granddaughter of retired science teacher Pat Harnett of Monagea.
- The Magner family from Coolanoran entered, Kate (2006 & 2007), Alicia (2007 & 2009) and Rose (2010 & 2012)
- Record for the most family members entered goes to the Upton family, with Shauna (2009), Michael (2000 & 2010), Liam (2012) and cousins Catherine (2007) and David (2011). Despite not entering the competition in 2013, Michael was selected by BT to be a Guest Information Ambassador.

## **Tommy Quaid – Sunday Press Article**

The following article appeared in the Sunday Press in June 1973

#### THE DRINKING CHICKS – Strictly for the birds!

SIXTEEN year old Thomas Quaid, is determined that he will never drink or smoke in his lifetime - because he has seen the effects both substances had on chickens.

And he's a little bit upset too, because his drink experiment titled "strictly for the birds" ran into trouble from the Society for the Prevention of Cruelty to Animals.

Now the Department of Education has banned similar projects, under the 1876 Cruelty to Animals Act.

Thomas a final year student at Newcastle West Vocational School, said: "I was a bit disturbed at the fuss over my drinking chickens. I wanted to help people. By showing the effects of alcohol on the fowl, it could, perhaps, help bring the significance of the effects closer to humans".

His project won him second prize in the senior section of the Young Scientist of the Year competition last January.

Thomas, the second eldest of a family of three, studied the drinking habits of four chickens over a 16 week period. He started giving them alcohol when they were only one week old. One chicken was on brandy; one on whiskey, one on stout, one on beer.

The results certainly proved interesting.

**The Brandy Chick** - (A gradual build up to a glass a day with an equal amount of water was administered) – growth was retarded, intestines bloated, listlessness, staggering and gave the chick little to crow about. Weight, 5 lb.2 ozs.

**The Whiskey Chick** - Again a glass a day, with the same amount of water-Intestines inflamed; growth retarded and listlessness. Weight- 4 lbs, 12 ozs.

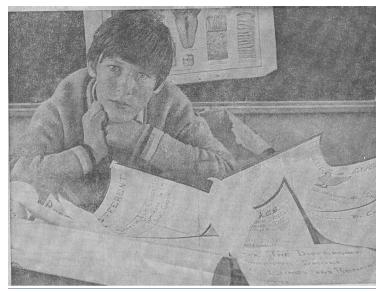
**The Stout Chick** - Build up to two bottles a day. A lot of fat around the heart. Lively enough in the cage. Weight 8 lbs 12 ozs.

The Beer Chick - Again two bottles a day —and it could consume a bottle in 12 minutes. Bloated intestines. But this was the liveliest bird of the lot. Plenty to crow about and hopped around the cage at night and day. Weight, 9 lbs 5 ozs.

Thomas also undertook a survey on the effects of alcohol on the 76 factory workers in the area - men and women over 18 and up to 60. He discovered that after drinking 31 per cent were unable to work as well then they would without alcohol; 31 per cent admitted to a loss of appetite; and 55 per cent showed a weight increase.

Two years ago, the Co. Limerick lad won first prize in the junior section of the Young Scientist contest — with his experiment on cigarette smoking chickens. By blowing smoke from a cigarette through a tube to a container of water, he concentrated the smoke in the solution and fed it to two chickens. Two other birds were given unpolluted water. The chickens on the nicotine solution had inflamed intestines and had a coating of tar on the guts. The other birds showed no ill effects. Thomas Quaid's projects were supervised by teacher Martin McNamara, B.Agric. Sc. who said: "The experiment was a positive one and it is unfortunate that people didn't see it in this light. The results can be of great help in our society."

And it is interesting to note that following the findings of the smoking chickens one of the teachers in the school gave up his 30 cigarettes a day.



**Thomas Quaid – Sunday Press June 3 1973** 

### **Memories:** by Denis Bucke

#### 1966:

"We started my project on the first week of April with twelve chicks sponsored by Castlemahon. I put the chicks in the back corner of the boiler house, which was especially set up for the project. Timmy Geary of Castlemahon Products supplied food and different types of protein products."

"Mr. O'Connell and I fed the chickens both low and high protein diets. The chicks were separated into pairs, in six different cubicles. The chicks were fed three times a day and weighed twice a day with the results being logged. Every month we changed the diet of the chicks and continued to monitor the growth of each pair. By November we found the best mixture of food, milk products and water that gave fastest weight gain."

#### January 1967 (Dublin):

"My dad drove us to the railway station in Limerick, where we met Joan Nolan and Michael Cregan (R.I.P.). We got the train to Dublin. Mr. O' Connell sister took us to the R.D.S. in Ballsbridge. I set my project up before feeding my chickens for the night. We all walked back to Mr. O' Connell's sisters house in Pembroke St. This woman looked after us so well, I will never forget it. My project came first in my category."

#### 1968:

"Mr. O' Connell helped me to secure my apprenticeship at McCormack's Joinery Ardagh in June of 1967. I had already started my next project on the soils of Broadford parish so I continued on this while working as well. I finished the project in middle of December. I travelled to Dublin in January of 1968 with similar arrangements to the previous year.

In 1968 Michael Joseph Lynch and Mary Shine also entered projects, Mary received 3rd in her category."

"During my time in the Vocational School, the school had a girls and a boys section, we had the following teachers:"

Mr. O' Connell, Science, Gardening, and State of the Country

Mrs. Lyons, English

Mr. Toomey, Woodwork, Drawing, Mathematics

Mr. Collery, Irish

Mr. Higgins, Mechanical Drawing, Mathematics, Metalwork,

**Electricity Magnetism** 

Mr. Hennessy, Art and Classical Music

Miss Hillary Tatten, French

Ms. Ryan, Commercial

It was a very enjoyable experience for me.

Denis worked for Paddy McCormack's for seventeen years until it closed. He emigrated to Australia for five and a half years before returning to West Limerick in 1989. Denis established a thriving business making geometrical wooden staircases providing employment for five others.

## "It's amazing what time does to memory!" by Jim Kelleher

In advance of the Young Scientist Competition we always had a plan. We selected students who were:

- 1. Interested in science
- 2. Good workers
- 3. Well behaved

We would start each project in the month of September; Initially we would begin with a few hours per week, but as the mid term approached we got more serious and we would always be in over the Christmas to polish it off.

Martin McNamara and I all helped out at each project including the printing and colouring etc, all of which had to be done by hand. There was no stencils or coloured paper available at the time. especially in the earlier years. Like the paper, there were no expenses available either, so we went to Dublin in the early hours of Tuesday morning each year to have the projects setup for the 12noon deadline. Most of the others would have been set up on the Monday. We got faster at it after a few years as we made up a stand to match our display in school and we made charts etc. to suit. We staved with friends or relations. I would keep one competitor and Martin the other. On a few years, school started on Wednesday so we would stay in Dublin until Thursday or Friday and gain a few extra days holidays. After a couple of years Mr. Rushe (C.E.O. Co. Limerick VEC) gave us some expenses so we were then in a position to stay in Jury's in Ballsbridge, which was near the exhibition centre. Expenses weren't great but still we didn't loose a lot out of our own pockets like the early years.

We had some very exciting years when our projects were getting a bit of attention and we thought it was very enlightening for our students to be competing with the best schools in the land. Although we didn't top the bill at any stage the name "Newcastle West

Vocational School" kept popping up at a time when very few other country schools were entering.

We can look back on great years of the Young Scientist and its fabulous to see that the tradition continues. Long may it last.

### Jim Kelleher.



## Memories of The Young Scientist Exhibition by Connie Murphy

I first visited the young science exhibition in the late sixties. The exhibition at that time was small by today's standards but very impressive. This was to be the start of a long series of visits. When I started teaching in the Vocational School in Newcastle West in 1975, the school already had a tradition of submitting projects for the competition pioneered by Eamonn O' Connell and followed by Martin McNamara and Jim Kelleher.

During the 1976 school year I became involved with a group of students studying the socio-economic effects of the then thriving Castlemahon poultry products on the surrounding area. The project won 1st prize in a competition organised by County Limerick Enterprise Board. They subsequently revised it somewhat and submitted it for inclusion in the young science exhibition of January 1977. It was accepted and went on to be highly commended. This was the start of an eight-year continuous run of entries winning awards on several occasions.

During all this time Aer Lingus was sponsoring the competition and usually block booked Jury's hotel in Ballsbridge or the Montrose hotel in Stillorgan giving the students a very competitive room rate. The move was an excellent one as both locations were very close to the R.D.S. and provided an opportunity for all teachers and students to socialise together in the evenings. We all very much enjoyed our stays there especially the students who could be found up and down in the lifts during their free time.

On one memorable occasion in January 1982 on the Friday evening as the results were to be announced, Dublin and the east was hit by a huge snowstorm. In a strong easterly wind, drifting occurred, when 25cms of snow fell. The city ground to a halt. The Saturday and Sunday public viewing sessions were cancelled and we were left stranded in Jury's for the weekend. We left early on the Sunday morning, got stuck on the Naas dual carriageway for hours and finally reached home almost 12 hours later.

On another occasion we travelled up early on the Wednesday morning. Being January 6th it was a holy day. While passing through Borris-in-ossary at 8am people were going into mass. We saw this as an opportunity to get mass quickly but unfortunately it lasted an hour resulting in a frantic dash to the R.D.S. as on arrival stands had to be organise for judging to begin at 11 O'clock. On one particular year Pat Broderick was investigating anti-biotic residues in foods. He picked up a carton of milk in a local shop on his way in and guess what, it tested positive during the judging. How food quality has improved since the early 1980's!

In conclusion I wish to acknowledge the hard work undertaken by all the entrant's. The amount of time and effort had to be seen to be believed. I also wish to pay tribute to the many firms and individuals who gave so freely of their time and expertise in the interest of science.

C. Murphy



# I.C.E. Intelligent Cat's Eyes by Aine Mulcahy & Claire Conaghan

The Young Scientist Competition is one of the best memories I have from my time in Desmond College, which is mostly down to Mr. Enright, our mentor. Claire, Seán and I were one of the first groups from the school in nearly fifteen years to enter. We started work on our project, I.C.E. – Intelligent Cats Eyes, during the summer previous to the competition, putting together ideas and a proposal for the judges. The excitement we felt when we were told us we had been accepted left us beaming for weeks after, but then the work had to start

I can remember one of my jobs was to measure the temperature of the surface of the road at various times during the day and night and chart it. We managed to source thermo chromic ink from a company in England, which is temperature sensitive ink, this became the key element in our project. Seán was tasked the job of dismantling numerous cats eyes to expose their inner pieces, a tricky process as the cases were very delicate and we then set about discovering the best way to incorporate the ink into the cats eyes.

We spent many lunch times and Christmas holidays in the computer room with our teacher going over our project in extreme detail, prepping possible questions, setting up our display and learning everything we possibly could about the workings of the ink and cats eyes. Mr. Enright gave up so much of his time to help us and without his guidance we would not have achieved what we did. He even took the responsibility of transporting and supervising three teenagers in Dublin!

Walking into the RDS to set up we were overwhelmed with the size of the competition, there was rows and rows of students setting up projects and sussing out the competition. Once we were happy with our display we went on a bit of an excursion up Grafton Street, a bit of down time before the stressful days of judging ahead.

We received quite a bit of media attention for the project and had a few television interviews which were amazing and nerve wrecking at the same time, along with the first two rounds of judging where we spoke to one or two judges. The last session was the most daunting experience I've ever had, Claire, Seán and I had to face eight judges at once firing all sorts of questions at us about

the intricate workings of the project, especially regarding the ink we had used. This round left us quite excited for the prize giving later that evening.

On Friday evening everyone was brought into the arena and the long list of prize winners were called out. We were announced winners of the Patent Award. After the judging, we received earlier we were slightly disappointed but still very proud of ourselves. Having won a prize we thought that was it so when they came to the top four prizes we were beyond surprised when they announced us as the Runner Up Group. It was the absolute highlight of the competition!

The following morning we arrived into the RDS and found our display had been moved to the centre of the entrance along with the three other overall winners. The competition was such a fantastic experience from start to finish and it will be a memory I will always cherish!

I still have Intelligent Cats Eyes with the thermo chromic ink in the freezer ...... and they still work!!



Bill Murphy ESAT BT, Aine Mulcahy, Claire Conaghan, Sean Liston and President Mary McAleesse

#### **Eddie Mullane remembers**

I represented Newcastle West Vocational School at the Young Scientist in 1974 in the Junior Biochemistry Section. My project was "To observe the effect of different diets on rabbits." Martin McNamara assisted me and I achieved first place. Here are some of the mementoes I kept from that time.



Students at the Newcastle West Vocational School being presented with cheques to mark their success in the Young Scientist of the year contest. Eddie Mullane, James Anglim, William Wrenn. Mr. Michael Herbert T.D., Rev Canon Tynan P.P. Croom, Mr. Martin McNamara science teacher and Mr. Sean Rush C.E.O. of the County Limerick Vocational Education Committee.

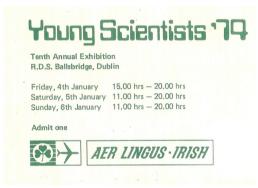
**PRIZES FOR LIMERICK STUDENTS** – Limerick Leader March 10<sup>th</sup>, 1974

Limerick Vocational students should follow the fine example of the Newcastle West school. For the past three years its students have won awards at the Young Scientist of the Year Exhibition, said Mr. Michael Herbert, chairman of the V.E.C. this week.

He was speaking at a function to present awards to three students from the school who won prizes at the R.D.S. Exhibition.

Edward Mullane, Kileedy won first prize in junior biochemistry; James Anglim and William Wrenn both of Monagea, were highly commended in the senior biology and geography sections.

Mr. Herbert paid tribute to the school and said it had a very fine tradition in the field. A special word of praise went to the science teacher, Mr. Martin McNamara, and the three boys will this year take their intermediate certificates.



Ticket from 1974





1974 - Catalogue

### InVigil8 - Sean Duffy & Warren Gleeson

On the 13<sup>th</sup> of January 2012 at approximately 5:00 pm, Warren and I won the "Analog Travel Award for Design an Innovation" as well as 1st in our category. To be completely honest we could not believe it. Seconds before it we were thinking of how lucky the winner was going to be having no confidence in ourselves what so ever. To this day I still don't know what I did or said in the five minutes after the announcement. Supposedly I sprinted up and almost rugby tackled Warren when we got up there. Thinking back on it, this could possibly be the best moment of our lives.

**Day 1**: Almost 7 months later we found ourselves boarding a plane to London from Shannon. I don't remember much of the flight mainly because of the excitement. When we arrived in Heathrow we were on the brink of starvation because of our refusal to pay five euro for a sandwich! When we arrived in a place called the Breakfast Hut, Linda Garvey (an Analog Devices staff member who was taking us on the trip) told us that we could have whatever we wanted and she would pick up the bill. Immediately I looked to see what was the most expensive item there but chose not to abuse the company's generosity and chose a full English Breakfast. This was the start of the best week of my life foodwise. After a wander around the gadget shops we boarded the plane heading for the San Francisco airport. The flight could have done as a holiday itself, we flew Virgin Atlantic Premium Class and we had everything we could have wanted apart from enough food (I ended up eating Warren's dinner while he was asleep). After we arrived in San Francisco we drove to the hotel, settled in then went and got something to eat. We went to the Cheesecake Factory on the 20<sup>th</sup> floor of a building and I swear to this day, they make the nicest Pasta Linguine I've ever tasted.

Day 2: Day two began around 4:00 am in the morning because I couldn't get used to the time change. It wasn't all that bad I could talk to family at home, go to the pool or watch the Olympics that were on in London at the time. That day we cycled God only knows how far around San Francisco. This guided bike tour brought us through the city across the Golden Gate Bridge and into Sausalito a

small town about 13km from San Francisco. Cycling across the Golden Gate Bridge was amazing even though I was afraid of heights. While we were cycling there was a small pouch on the front of the bike, which was probably to store the supplied map or a phone, inside mine however was a pack of Jacobs Rich Tea's to keep us going for the day.



Sausalito, California

Day 3: We went on a tour around the city, at first we walked around an area called The Fisherman's Wharf getting stuck in umpteen gadget shops thanks to Warren and Mr. Enright. After this we rode the duck boats around the city. This duckboat was basically a boat with wheels in the shape of a duck. We saw all the great city attractions on land and in the water including Alcatraz island. The tour guide was very entertaining and we also got to drive the boat. That evening we had planned that we would ride the cable cars. Instead decided to stay put and enjoy a delicious meal at a small diner.



Alcatraz Island

Day 4: This was a very action packed day which consisted of a lot of travelling. First we had to check out of our hotel then drive all the way down to San Jose. We had to go to the Analog Devices factory there and present our project to the people working there. We were guided by a young man from Waterford called Steven and he made our trip very entertaining. We were shown what actually happened at the factory but it was very complicated and most of it went straight over our heads! At 1:00 pm it was time for their break. We were brought outside to a football pitch at the back of the factory and were put onto teams in a 5 a side soccer match. We didn't think this was how very intelligent professional men spent their lunch but we all enjoyed the game. We then travelled to Stanford University thanks to the not so trusty SatNav. We were given a guided tour of the campus and almost fell in love. It was great to see there were more options other than the universities at home in Ireland. After this visit was yet more travelling. We were to get a plane to L.A.!



Library, Stanford University, Stanford, California

DAY 4: We went sightseeing in Hollywood like stereotypical tourists. To be honest it wasn't what we were expecting at all. We were picturing the beautiful Hollywood like in the films. But instead all we found was a dirty street with homeless people and young upcoming stars trying to sell you CD's. It's not all its cracked up to be!

DAY 5: We went to 6 Flags, one of the biggest theme parks in the world. We had the best craic of our lives. The rides were huge, these included Goliath and The Viper and the tallest ride in the world, Superman. We seemed to have gone on every ride except that one! It was honestly too high and Warren even got scared when he was standing underneath it. Probably the best laugh we had there was on the merry-go-round. Warren, Mr. Enright and I went to hand back our fast passes while Linda waited outside. When we came back out Linda was on the merry-go-round having the time of her life. We all joined her for one more go and capped a great day off at the theme park.

DAY 6: This perhaps may have been our most exhausting day. In the morning we got a taxi down to the California Science Centre. It was the most interesting "museum" I have ever been at anyway. It was designed to encourage young people to engage in science and it certainly succeeded in doing that. After this we went to an IMAX show that was part of the Science Centre. The IMAX Show was basically a high definition/3D documentary about Egypt, it turned out to be really interesting. That evening we drove to the Citadel Outlets. This was one of the biggest and best outlet centres in the world. We spent a whole afternoon browsing. I honestly spent half my money there but the clothes were so cheap, it was unbelievable value.

DAY 7: We went to Universal Studios. The rides there were not as scary as 6 Flags but were more entertaining. It also included rides that Mr. Enright and Linda could go on. These included the Simpsons Ride and The Jurassic Park Boat ride. We took a guided tour around Universal Studios, which showed us where everything was being filmed. It was probably the most enjoyable day of the trip.

DAY 8: We left for home via London. The journey was not as long as the one going out, London was busy with athletes arriving for the Olympics 2012.

DAY 9: We arrived home in Shannon to two very welcoming families and siblings who just came for their presents.

It was the trip of a lifetime and we were blessed to have it at such a young age. It will stay in our minds forever.

#### Buíochas

A special thanks to all those that have assisted in the compilation and printing of this publication.

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Limerick City Library

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## Where are they now?

Anglim, James 1973, 1974, 1975, 1976 Limerick Building College Aughinish Alumina	
Baer, Aine 2010	Social Studies in Institute of Technology Tralee
Barrett, Kevin 1977	
Barrow, Fiona 2013	2 <sup>nd</sup> Year Student Desmond College
Barrow, Lisa 2012, 2013	6 <sup>th</sup> Year Student
Barry, Connor 2012, 2013	6 <sup>th</sup> Year Student Desmond College
Bridgeman, Sophie 2013	2 <sup>nd</sup> Year Student Desmond College
Brislane, Kate 2009, 2012	Biomedical Engineering C.I.T.
Broderick, Patrick 1980, 1981, 1982	
Brosnan, Kevin 2009	Mathematical Sciences in University of Limerick
Brosnan, Steven 2013	5 <sup>th</sup> Year Student Desmond College
Browne Eamonn, 2013	3 <sup>rd</sup> Year Student Desmond College
Browne, Lorna 2012	6 <sup>th</sup> Year Student Desmond College
Bucke, Denis 1967, 1968	Self Employed Geometric Stairs Manufacturer
Bucke, Gemma 2008	Science Education in NUI Maynooth
Bucke, Grainne 2008	Clinical Measurement Science D.I.T. Kevin Street
Byrnes, John 2012	5 <sup>th</sup> Year Student Desmond College
Carmody, Seamus 1989, 1990	-
Clarson, Laurence 1975	
Colbert, William 1983, 1984	
Collum, Claire 2013	5 <sup>th</sup> Year Student Desmond College
Conaghan, Claire 2005	Marketing Degree with Languages L.I.T.
Condon, Orlaith 2012, 2013	6 <sup>th</sup> Year Student Desmond College
Conor, Leahy 2013	3 <sup>rd</sup> Year Student Desmond College
Considine, Dermot 2007	Bachelor of Commerce NUIG - Lieutenant in the Irish
	Defence Forces
Copse, Edel 2011	Letterkenny Institute of Technology
Copse, Louise 2012	Limerick Institute of Technology
Craker, Colin 2013	5 <sup>th</sup> Year Student Desmond College
Cregan, Michael 1967 (R.I.P.)	
Cremin, Cian 2013	3 <sup>rd</sup> Year Student Desmond College
Cunningham, Michael 1978	
Curtin, Alan 2013	3 <sup>rd</sup> Year Student Desmond College
Curtin, Benjamin 1977	
Curtin, Diarmuid 2013	3 <sup>rd</sup> Year Student Desmond College
Daly, Michael 1978, 1979, 1980	
Danagher, Caoimhe 2013	2 <sup>nd</sup> Year Student Desmond College
Danaher, Mark 2012	6 <sup>th</sup> Year Student Desmond College
Delee, John 2011, 2012	5 <sup>th</sup> Year Student Desmond College
Derwin, Nikita 2012	6 <sup>th</sup> Year Student Desmond College
Dowling, Joanne 2010	Science Ed in UL - Biological and Chemical/physical
D 1: 1: 2012	sciences with concurrent teacher education
Dowling, Liam 2013	3 <sup>rd</sup> Year Student Desmond College

2<sup>nd</sup> Year Student Desmond College Duffy, Emily 2013 Duffy, Sean 2012 5th Year Student Desmond College Enright, Sarah 2011 Mallow College of Further Education Fanning, Jack 2012 4th Year Student Desmond College 5<sup>th</sup> Year Student Desmond College Flavin, Tom 2011, 2012 Flynn, Sean 1966 6th Year Student Desmond College Gayer, Shauna 2012 5<sup>th</sup> Year Student Desmond College Geaney, Simon 2013 Geary, David 1966 Geary, Tara 2013 5<sup>th</sup> Year Student Desmond College 5th Year Student Desmond College Gleeson, Warren 2012 3<sup>rd</sup> Year Student Desmond College Harnett, Brian 2013 Harnett, Kieran 2010 Commerce University College Dublin 5<sup>th</sup> Year Student Desmond College Harnett, Nikita 2013 Haves, Emma 2007 Limerick Senior College & Limerick Institute of Technology Heffernan, Michael 1983 Hennessy, Pat 1976 3<sup>rd</sup> Year Student Desmond College Herbert, Emma 2013 Bellissimo Academy Limerick Herbert, Kathy 2006 Herlihy, Laura 2010 6th Year Student Desmond College 5th Year Student Desmond College Hough, Shauna 2013 Hunt, James 2008 FAS - Mechanic Hurley, Katy 2009 Sports Rehabilitation & Athletic Therapy - Carlow I.T. 3<sup>rd</sup> Year Student Desmond College Hurley, Seamus 2013 Kelly, Darren 2013 3<sup>rd</sup> Year Student Desmond College Keogh, Gerard 1978 Lee. Shane 2012 4<sup>th</sup> Year Student Desmond College Liston, John 1979 Agricultural College Pallaskenry - Farming Liston, Michelle 2008 BA in Mathematics and Education NUI Galway Liston, Sean 2005 FAS - Electrician Long, Cormac 2013 5<sup>th</sup> Year Student Desmond College Lynch, Michael Joseph 1968 Mackessy, Ian 2009 Bachelor of Science in Product Design and Technology - University of Limerick Madden, Martin 2012, 2013 6<sup>th</sup> Year Student Desmond College Magner, Alicia 2007, 2009 BSc Midwifery - UCC Magner, Kate 2006, 2007 BA - Language and Cultural Studies - UCC MA Film Studies - UCC National University of Ireland - Galway Magner, Rose 2010, 2012 Limerick School of Art & Design & University of Massey, Keith 1989, 1990 Limerick McCarthy, Tom 1977, 1978, 1979 3<sup>rd</sup> Year Student Desmond College McCov. Graham 2013 3<sup>rd</sup> Year Student Desmond College McElligott, Sean 2013

BA Degree - UCC

5<sup>th</sup> Year Student Desmond College

5<sup>th</sup> Year Student Desmond College

3<sup>rd</sup> Year Student Desmond College

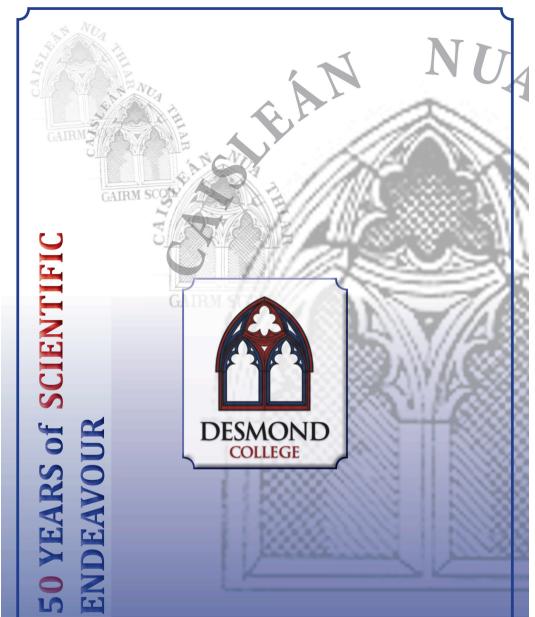
McMahon, Barbara 2007

McMahon, Darragh 2011

McMahon, Eoghan 2012 Morairty, Patrick 2013

Moran, Gerard 2008 Civil Engineering at Institute of Technology, Tralee Moroney, Raymond 1978 Mulcahy, Aine 2005 BA Degree University of Limerick Mulcahy, Michael 1983, 1984 Mulcahy, William 1981 Mullane, Edward 1974 Self Employed Mullins, Joseph 1969 5<sup>th</sup> Year Student Desmond College Murphy. Debbie 2013 BSc (Gen. Nursing) Institute of Technology, Tralee Murphy, Emer 2009 Nix. Sinead 2012 6<sup>th</sup> Year Student Desmond College Nolan, Jeremiah 1972 Nolan, Joan 1967 Nolan, Ciaran 2012 6<sup>th</sup> Year Student Desmond College 3<sup>rd</sup> Year Student Desmond College Normoyle, Claire 2013 O' Connor, Michael P. 1977 O' Brien, Liam 1983 O' Connor, A.J. 2012 6<sup>th</sup> Year Student Desmond College Junior Certificate Student O' Connor, Danielle 2013 5th Year Student Desmond College O' Connor, Declan 2013 O' Connor, Jack 2013 Junior Certificate Student O' Connor, James 2012 4<sup>th</sup> Year Student Desmond College O' Connor, Michael P. 1977 O' Dwyer, Sheila 1981(R.I.P) O' Flynn, Michael 2012 5<sup>th</sup> Year Student Desmond College O' Mahony, Laura 2012 BBs University of Limerick O' Flynn, Eileen 2010, 2012 6th Year Student Desmond College Quaid, John 1978, 1979 Self-Employed Master Hurley Maker Ouaid, Michael 1989, 1990 Quaid, Tomas 1972, 1973 (R.I.P) FAS Limerick - Electrician Reidy, Sarah 2006 FAS Limerick – Beauty Therapy Relihan, Mairead 2009 Leaving Certificate Student Roche, Denis 1977 Drug & Medical Analysis, L.I.T. Scanlon, Cieran 2012 Scannell, Christopher 2011, 2012, 2013 5th Year Student Desmond College Scully, Gerard 1981, 1982 Sexton, Billy 1977 Shanahan, Peter 2013 5th Year Student Desmond College Shine, Mary 1968 Singh, Courtney 2013 5<sup>th</sup> Year Student Desmond College Tobin, Shauna 2013 5th Year Student Desmond College Upton, Catherine 2007 Drama and Dance Teacher 6th Year Student Upton, David 2011 Upton, Liam 2012 4<sup>th</sup> Year Student Desmond College Upton, Michael 2010, 2012 Engineering C.I.T. Commerce B Comm UCC Upton, Shauna 2009 Walshe, Eamonn 1978 Walshe, Michael 1980, 1981, 1982 (R.I.P.) White, Christian 2013 3<sup>rd</sup> Year Student Desmond College Wrenne, William J. 1974, 1975 Aughinish Alumina – Water Treatment Engineer





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