



USING THE LEARNING GAIN TOOL® TO EXPLORE IMPACT

**IVE APPLIED CREATIVITY LAB**

**#breatheLeeds PROGRAMME**





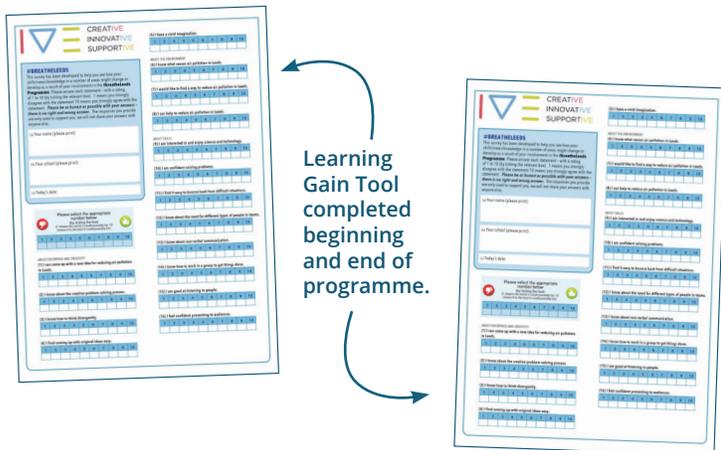
# USING THE LEARNING GAIN TOOL TO EXPLORE IMPACT 'IVE APPLIED CREATIVITY LAB: #BREATHELEEDS PROGRAMME'

## The IVE #breatheLeeds programme

In response to requests from young people to find creative solutions to real world challenges, IVE have developed their Applied Creativity Lab model. This intensive programme is designed to empower young people to come up with their own creative and often STEM-related solutions to real world challenges. The #breatheLeeds programme focuses on finding new ways to reduce air pollution in Leeds with pupils in John Smeaton Academy, Mount St Mary's Catholic High School and Manor Wood Primary.

## How the Learning Gain Tool was used on the #breatheLeeds programme

As part of their participation in the above programme, students were asked to respond to a series of statements linked to the Applied Creativity Lab programme. These questions were administered by the programme team as part of the first workshop session, and again as part of the final programme event. The bank of questions focused on understanding linked to enterprise and creativity, the environment and skill development. Questions were developed by Research Toolkit and have been used on other similar outreach and widening participation interventions designed to enhance STEM and creativity skills.



Learning Gain Tool completed beginning and end of programme.

## Learning Gain Tool

The Research Toolkit Learning Gain Tool®, is an interactive resource capable of assessing and measuring impact of educational interventions. It uses pre and post-activity data to explore impact from the perspective of the activity participant, school or stakeholder representative. This tool has been used across a number of outreach programmes and is also used by other widening participation providers regionally and nationally to identify effect, impact and distance travelled of educational interventions.



## About the data

Data were collected from 95 participants at the beginning of the programme, and 75 at the end of the programme. Participant data were combined to produce an average 'score' across the 16 question or statement areas at the beginning and end of the programme. At the beginning of the programme this resulted in the production of a 'temperature reading' of attitude, perceived skill and understanding. The difference in average values (pre- and post-programme) produces a distance travelled or 'learning gain' value.



Learning Gain surveys BEGINNING OF PROGRAMME



Mount St Marys' (12)



Manor Wood Primary (57)



John Smeaton Academy (26)



Learning Gain surveys END OF PROGRAMME



Mount St Marys' (11)



Manor Wood Primary (60)



John Smeaton Academy (5)



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## Percentage increases



For the purposes of transparency we include the numeric change in average value - from the beginning of the programme to the end of the programme (see **FIGURE 1:**

Learning Gain statement analysis: #breatheLeeds programme).

For example, the change in value of question 11 (*I find it easy to bounce back from difficult situations*) moves from an average of 6.72 to 8.08 by the end of the programme. To clarify this movement we have converted the change to a percentage figure; using the beginning of the programme as a base this represents a 20% increase at the end of the programme.

## Greatest Learning Gains reported



The greatest learning gains reported by participants on the #breatheLeeds programme were linked to enterprise and creativity skills, with sizeable gains reported in other crucial life-skill areas and environmental issues linked to air pollution.

### Creative and problem-solving skills

By the end of the programme, participants reported that their creative problem solving skills (Q2) had been increased by 49%. This may have led to the enhanced ability to generate new ideas for reducing air pollution in Leeds (Q1). Thinking divergently about issues had also increased dramatically by the end of the programme.



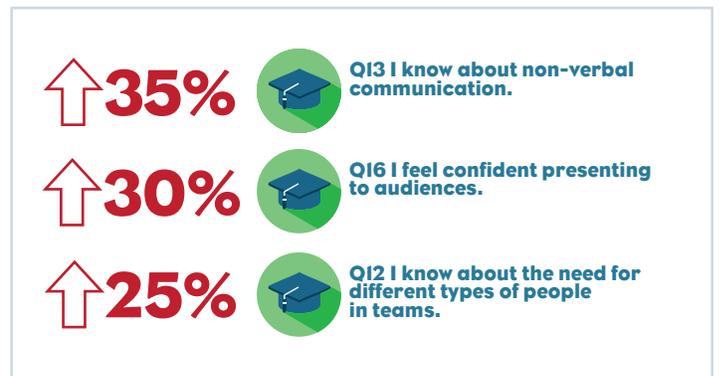
### About the environment

By the end of the programme, participating students had a much more positive view on their ability to influence action to reduce air pollution in Leeds (Q8), and their knowledge and understanding of the issues surrounding air pollution had become enhanced (Q6).



### About skills

Communication and presentation skills were developed and enhanced as a result of engagement with the #breatheLeeds programme. By the final session participants reported considerable gains in communication skills (Q13) and their presentation skills and techniques (Q16). In addition, through their active participation, pupils had a greater understanding of team roles and dynamics that are of value for creative group problem-solving (Q12).



We have ranked all questions by greatest learning gain reported (see **FIGURE 2:** Learning Gain statements ranked by largest learning gain).



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### Teacher reflections



As part of the #breatheLeeds programme, teacher interviews were carried out following the final workshop session. These were informal one-to-one discussions held at each school site. Topics covered a range of issues linked to effect and impact of the programme.

#### Working creatively

Working creatively in teams was identified as a useful element of the programme - enabling pupils to develop their group-working skills, and to acknowledge differing abilities and strengths in a team.

**“... I noticed that there were some people where there wasn't any big fuss made about it [working in teams] ... but they all had a role. They all felt part of it. ”**

#### Skill development

For some schools and staff, the resource effort required to participate in the project was considerable. However, the impact and gains made by pupils helped to make this worth the time and effort.

**“... it's been quite a challenging process but it's really shown that as teachers its worth doing other projects and pushing ourselves ... the experiences, skills, learning and memories that the children get from this is fantastic. ”**

**“... I'd absolutely recommend it, but I think you need to have a teacher who is fairly flexible and passionate ... I was thinking would it be better if we had longer but then it might have felt like it was dragging on. ”**

#### Improved confidence

A number of comments were made by teaching staff at all schools about the positive impact on pupils. Particular emphasis was focused upon the development of confidence skills.

**“... [student] has really gained confidence ... I teach her and she's like a renewed person almost, she's just got that extra bit of oomph about her. It's helping in lessons because she's willing to speak up about things and share an answer. She's got a bit of a voice from it which is really helping her learning because she's not just sitting there quietly, struggling and too scared to ask for help. ”**



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	Pre	Post	Change %
<b>ABOUT ENTERPRISE AND CREATIVITY</b>			
(Q1) I can come up with a new idea for reducing air pollution in Leeds.	6.09	9.03	↑48%
(Q2) I know about the creative problem-solving process.	5.62	8.39	↑49%
(Q3) I know how to think divergently.	6.22	8.41	↑35%
(Q4) I find coming up with original ideas easy.	6.80	8.38	↑23%
(Q5) I have a vivid imagination.	7.63	8.97	↑18%
<b>ABOUT THE ENVIRONMENT</b>			
(Q6) I know what causes air pollution in Leeds.	8.13	9.54	↑17%
(Q7) I would like to find a way to reduce air pollution in Leeds.	8.84	9.51	↑8%
(Q8) I can help to reduce air pollution in Leeds.	7.33	9.14	↑25%
<b>ABOUT SKILLS</b>			
(Q9) I am interested in and enjoy science and technology.	7.89	9.07	↑15%
(Q10) I am confident solving problems.	7.45	8.71	↑17%
(Q11) I find it easy to bounce back from difficult situations.	6.72	8.08	↑20%
(Q12) I know about the need for different types of people in teams.	7.36	9.18	↑25%
(Q13) I know about non-verbal communication.	6.34	8.53	↑35%
(Q14) I know how to work in a group to get things done.	7.96	9.07	↑14%
(Q15) I am good at listening to people.	8.32	9.29	↑12%
(Q16) I feel confident presenting to audiences.	6.35	8.30	↑31%

	Pre	Post	Change %
(2) I know about the creative problem-solving process.	5.62	8.39	↑49%
(1) I can come up with a new idea for reducing air pollution in Leeds.	6.09	9.03	↑48%
(3) I know how to think divergently.	6.22	8.41	↑35%
(13) I know about non-verbal communication.	6.34	8.53	↑35%
(16) I feel confident presenting to audiences.	6.35	8.30	↑31%
(12) I know about the need for different types of people in teams.	7.36	9.18	↑25%
(8) I can help to reduce air pollution in Leeds.	7.33	9.14	↑25%
(4) I find coming up with original ideas easy.	6.80	8.38	↑23%
(11) I find it easy to bounce back from difficult situations.	6.72	8.08	↑20%
(5) I have a vivid imagination.	7.63	8.97	↑18%
(6) I know what causes air pollution in Leeds.	8.13	9.54	↑17%
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(9) I am interested in and enjoy science and technology.	7.89	9.07	↑15%
(14) I know how to work in a group to get things done.	7.96	9.07	↑14%
(15) I am good at listening to people.	8.32	9.29	↑12%
(7) I would like to find a way to reduce air pollution in Leeds.	8.84	9.51	↑8%

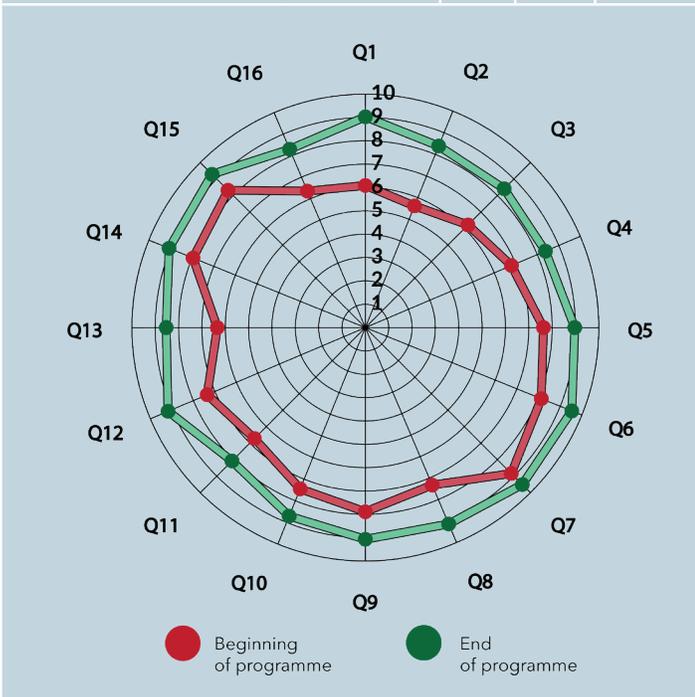


FIGURE 2: Learning Gain statements ranked by largest learning gain

FIGURE 1: Learning Gain statement analysis: #breatheLeeds programme