



**Arnside &  
Silverdale**  
National  
Landscape



**Bittern**  
Countryside  
Community Interest Company

# Marvellous Moths

## 'I'm not scared of moths anymore' - Beetham Pupil

This project was delivered by Larksfoot CIC on behalf of Bittern Countryside CIC and the Arnside and Silverdale National Landscape. It was commissioned to enhance conservation awareness and support for moths among primary school children within the National Landscape boundary.

The project focused on the Garden Tiger Moth as a representative species of the declining moth population and encouraged children to **take active steps** to protect their local moths. Through hands-on and fun activities, the project created opportunities for children to form personal connections with the moths, fostering greater **knowledge**, **understanding**, and **empathy** towards these insects.



## Evaluation Techniques

During the initial planning for the sessions it was clear that the 3 overwhelming criteria for evaluation were

1. Did the participants feel empowered to take meaningful action?
2. Did the participants learn something that gave them a greater understanding of the topic?
3. Were the participants interested or engaged in the topic?

This informed the planned evaluation activities. A variety of techniques were employed in order to gather both quantitative and qualitative data that can be used to review the project and inform future action and projects.

Several targeted evaluation activities were integrated into the program to collect authentic data and minimize 'leading' responses from participants wherever possible. This included,

- Moth Posters

- Animal Parade
- Pledge Postcards

In addition, two types of feedback forms were used to gather data: one for the teachers accompanying the groups and another for the practitioners delivering the sessions. These forms served as reflective tools and included both Likert scale questions and open-ended comment sections, allowing for in-depth feedback across all evaluation criteria.

Across these five evaluation activities, we were able to gain an understanding of how effectively the sessions met their objectives, as well as insights into the types of actions that may be appropriate in response to the findings.



## Program Delivery

The project was delivered over five days, with one day dedicated to each participating school. Larksfoot CIC welcomed a total of 86 primary school children and 19 accompanying adults to Silverhelme Scout Camp. The two practitioners, Emily Rowe and Emma Taylor, met each group onsite. All schools opted to arrange their own transport, with four schools providing transport via their own or hired minibuses, and one school asking parents to drop off children directly at the site.

At the beginning of the day the children were asked as part of their activities to participate in an 'Animal Parade' with practitioners gathering data regarding how many children chose to move in the parade as a Moth. This creates a baseline that we can use to infer changes to the participants' opinions regarding moths from the beginning of the day to the end.

The participants are then introduced to real moths through the use of a Moth Trap. This 'face to face' interaction with our local moths is intended to provide a connection to the moths as real creatures that need our protection. Throughout the morning there are opportunities to learn about moths as pollinators, their caterpillars and their life cycles, The Garden Tiger Moth specifically and the threats facing our Moth population. This is through a presentation with images and information.

Through the afternoon the children consolidate their knowledge through artistic work including a poster highlighting the need to take action for moths, designing stickers to go on light switches that will remind people to turn them off. Through discussion the group reflects on ways they can take small practical steps to help. At the end, another minibeast parade takes place to gauge if the group are more interested and empathise more with Moths.

We have evaluated this program to understand its impact on participating children, specifically in relation to their awareness, interest, and sense of empowerment around moth conservation. By assessing how well the session supports learning and engagement, we aim to inform future development of similar activities and ensure meaningful outcomes for young participants. This evaluation draws on a range of creative and reflective methods to capture both qualitative and quantitative insights from pupils, teachers, and practitioners.



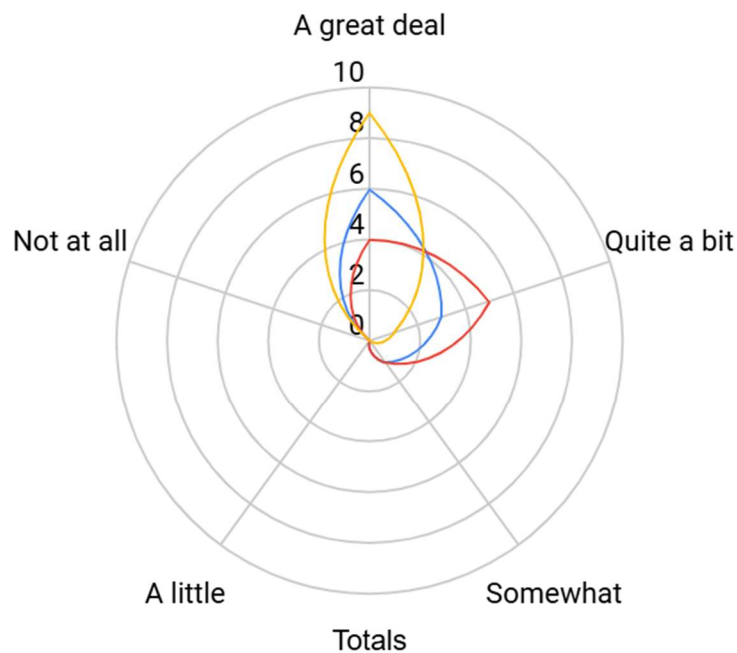
## Findings

Teachers were asked to rate pupils' confidence, awareness, and engagement after the session using Likert-style scales. These questions helped us evaluate whether the programme met its core goals: to empower, inform, and inspire children about moth conservation.

We also documented a Practitioner Reflection each day following the session with similar questions and emphasis on the 3 outcomes.

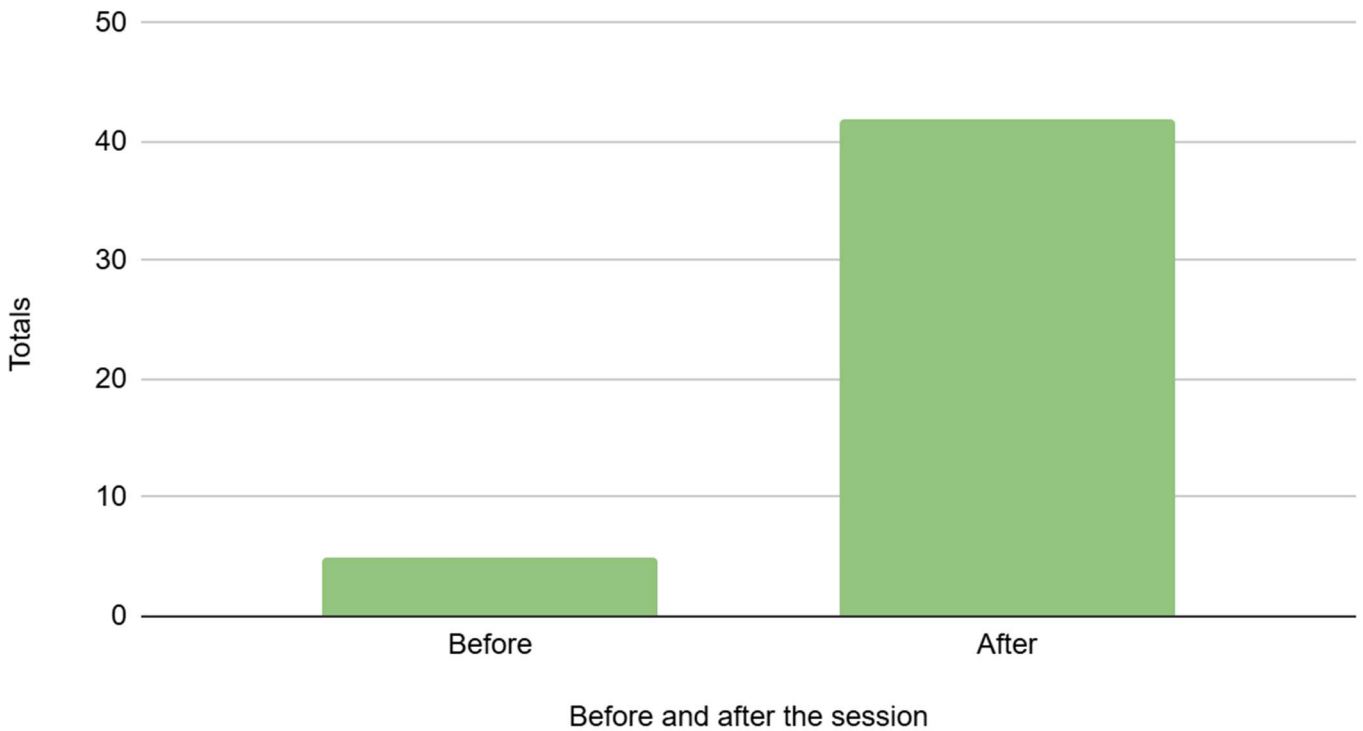
### Likert Scores - Combined from Teacher and Practitioner feedback

- Empowerment (Confidence to help moths)
- Understanding (Information learned about...)
- Interest (showing curiosity and engaged with moths)



During the sessions the Practitioners made notes regarding the Animal Parade numbers for comparison.

## Number of children who identified at Moths



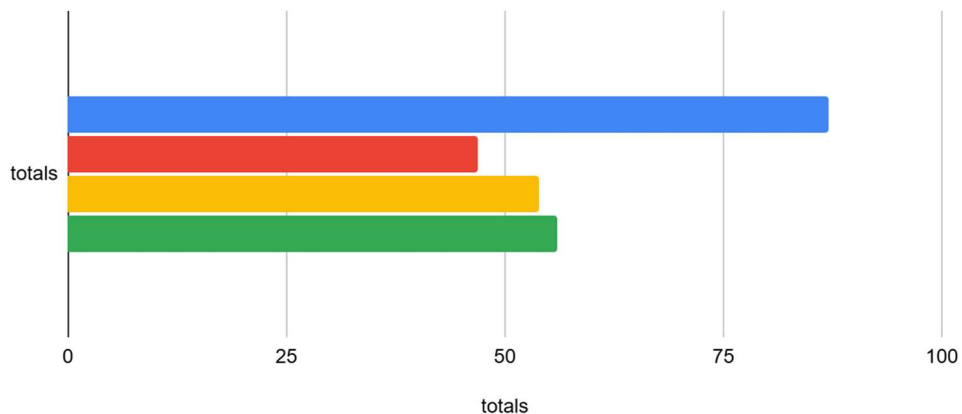
Following the session we have analysed the data contained in both the poster activity and the postcards. Gathering data such as number of posters/ postcards created and the themes included in the pledge postcards as well as specifics about the information included on the posters.

There were 3 specific queries recorded -

1. 'Did the poster show empathy for the moths? This might include emotive language such as 'Help', 'Please' or 'Save'. Or it could include referring to the moths in 1st person, using emotive drawings such as smiley faces or hearts or even describing them as important, amazing, brilliant etc.
2. 'Did the poster contain detail that suggests the participant felt they had learned things about the moths and cared about the individuality of the moths to include the facts in their poster?' - we measured this by counting the number of posters with 2 data points included, this could include facts about the moths in written form or detail included in their images of the moths that clearly differentiate them from other moths.
3. 'Did the poster contain a specific detailed call to action, that the child will have felt able to pursue following the session?'

### Breakdown of Poster content

■ Total # Posters   
 ■ Moth Posters showing Empathy - Use of emotive language  
■ Moth Posters showing Knowledge - Detail and facts  
■ Moth Posters showing Empowerment - Call to action



## Additional considerations

- In the posters where children included facts, emotive language and or a call to action they have been counted in each section.
- Similarly where children have written more than one pledge on their postcards each pledge has been counted towards the relevant theme section although only counted as 1 card in the total.
- For Silverdale school the results of the postcards are skewed as they did one postcard as a group. This meant we were able to gather data around the themes of their ideas but not the specifics of how individual children felt empowered.
- During the Postcard activities Storth School completed more postcards than the number of children attending. It is unclear if this is because the 6 attending adults took part in the activity or the children felt moved to write more than one.
- During the session with Storth school the practitioners also asked 'Do you like moths? Do you dislike moths?' at the beginning and end of the session. This data is as follows -

Storth - Who likes moths?	Like	Dislike
Start	10	15
End	24	1



## Impacts and outcomes

### Awareness -

The evaluation evidence suggests that pupils left the sessions with a good level of awareness about moths and the challenges they face. Teachers in three schools rated pupil understanding as “very well,” while the remaining two rated it as “quite well.” This indicates a consistent recognition of threats across all groups.

Qualitative comments reinforced this, with children linking new knowledge to their existing understanding of butterfly life cycles, identifying issues such as hedgerow removal, and asking thoughtful questions like “what might eat them?” The combination of factual recall and problem-solving shows that pupils were not only absorbing information but also beginning to apply it.

At the same time, the reflections noted that some younger pupils were less confident at recounting facts, suggesting that awareness may develop further with repeated exposure and reinforcement. This is reinforced by practitioner feedback, suggesting that children younger than year 3 required a different session content to reach the same level of success.

Overall, the programme appears to have met its aim of building knowledge, while also highlighting areas where learning can be deepened in future sessions.

## Empowered

Teachers' ratings suggest that most pupils felt capable of taking action to support moths by the end of the session. Four schools rated empowerment at the highest levels ("a great deal" or "quite a bit"), with only one group assessed as "somewhat." This shows that the majority of children left with a sense of agency.

The qualitative evidence provides rich examples of this: pupils pledged to persuade family members not to harm moths, shared ideas about creating wildlife-friendly spaces, and discussed ways to reduce light pollution. One teacher described how children advised one another to avoid disturbing moth habitats during activities, showing empowerment in action.

While the variation across schools hints that empowerment may depend on the age or confidence of the group, the overall pattern indicates that the programme succeeded in encouraging children to see themselves as capable of making a difference.

## Interested

The evaluation data points strongly to a very high level of pupil interest. All but one school rated children as "extremely engaged," with the remaining school selecting "very." Comments highlight pupils' enthusiasm in identifying moths using guidebooks, their fascination with the variety of shapes and colours, and their excitement during moth releases.

Teachers noted reductions in fear among initially hesitant pupils and even reported children suggesting follow-up actions, such as writing to an MP about conservation. These responses show both emotional engagement and intellectual curiosity. While interest levels were already high during the live moth encounters, the artistic activities and games also reinforced enjoyment and provided creative outlets for learning. Overall, the programme appears to have exceeded expectations in fostering genuine curiosity and empathy towards moths.

## Conclusion

The evaluation shows that the Garden Tiger Moth education programme was successful in meeting its three core aims: empowering children to take action, raising their awareness of threats to moths, and sparking genuine interest in these often-overlooked insects. Both quantitative ratings and qualitative reflections demonstrated that pupils were highly engaged, gained new knowledge, and felt motivated to share what they had learned with others. Teachers reported strong levels of confidence among children in identifying practical steps they could take, while creative activities and direct encounters with live moths helped to reinforce empathy and fascination.

Although some variation was noted between groups, particularly among younger pupils who were less confident in recalling detailed information, the overall findings indicate clear and positive outcomes across all schools. The programme has provided a model for how immersive, hands-on, and creative approaches can foster meaningful connections between children and the natural world.

Looking ahead, there is scope to build on these foundations by repeating and expanding the programme, providing opportunities for reinforcement, and embedding learning into wider environmental education. In doing so, the project not only supports moth conservation but also nurtures the next generation of environmental stewards.



# Recommendations

## 1. **Develop a Companion Programme for Younger Pupils**

While older groups demonstrated strong recall and application of new knowledge, younger children sometimes found it harder to retain detail or articulate threats to moths. A parallel programme, designed specifically for early years and lower primary, could use storybooks, songs, simple games, and sensory activities to introduce key ideas in a more accessible way. This would ensure that younger pupils build confidence and familiarity before progressing to the more detailed programme.

## 2. **Reinforce Learning Across Ages**

Repetition and reinforcement are important across all age groups. Building in follow-up activities at school — such as quizzes, moth hunts in the playground, or mini-projects — would help embed awareness more securely.

## 3. **Sustain Empowerment Beyond the Session**

Children responded enthusiastically to pledges and practical actions. Providing simple take-home resources (e.g. family action cards, classroom displays, or follow-up challenges) would help transfer empowerment into real behaviour change. Including follow up support from the National Landscape team to meet the children's own pledges would enforce the idea that they are capable of making a difference.

## 4. **Expand Creative and Reflective Approaches**

The combination of art, games, and live encounters was particularly effective in sparking interest. Future programmes might explore additional creative methods (such as storytelling, digital media, or outdoor art installations) to capture different learning styles.

## 5. **Strengthen Community Links**

Teacher comments highlighted children's desire to share their learning more widely. Opportunities to connect with local community groups, parents, or conservation projects could build on this momentum and amplify impact.

## 6. **Extend Reach Beyond the National Landscape**

The programme has so far been delivered within the Arnside and Silverdale National Landscape. Taking it to schools beyond this area would broaden its reach, engage more diverse communities, and ensure that children in a variety of settings can benefit from the learning. Working with urban schools and groups with limited access to nature could add an important dimension and extend the programme's impact.

## 7. **Continue Monitoring and Sharing Impact**

This evaluation has provided a strong baseline. Developing a consistent framework for collecting and analysing data across future sessions will ensure evidence of impact remains robust and can be shared with partners, funders, and wider education networks. By also working with schools outside the National Landscape, the data set could be widened, providing larger group sizes and reducing the effect of skew or anomalies that sometimes occur with smaller samples.

# Appendices

## Appendix 1 -

Activity Evaluations	Storth	Arnside	Beetham	Warton	Silverdale
Animal Parade - Number of moths represented at start of session	2	0	0	4	1
Animal Parade - Number of moths represented at end of session	22	7	5	23	7
Moth Posters - Totals	25	10	13	27	12
Moth Posters - Empathy - Use of emotive language (e.g. help, save, 1st person etc)	18	4	9	13	3
Moth Posters - Detail and facts ( At least 2 points of information can include accurate colours and detail on picture	16	8	7	16	7
Moth Posters - Call to action - Must have at least one actionable call to action	17	8	13	12	6
Pledge Postcards - Number completed	34	-	12	25	1
Pledge postcards - Lights	15	-	7	12	1
Pledge Postcards - Curtains	9	-	0	1	0
Pledge Postcards - Pesticides	2	-	0	1	1
Pledge Postcards - Weeds/planting flowers	6	-	5	8	1
Pledge Postcards - Spread the Word	7	-	1	10	1
Pledge Postcards - Reduce Energy use	1	-	0	0	0
Pledge Postcards - Data Collection	1	-	0	0	0

Appendix 2 -

Practitioner Feedback	Storth	Arnside	Beetham	Warton	Silverdale
Did the children seem to feel capable of taking care of moths?	A great deal	A great deal	Quite a bit	A great deal	Somewhat
Notes/Examples	They all came up with good and relevant pledges	e.g. came up with lots of ideas for different ways they can help moths	All were able to write a promise card to the moths	confident pledges and wide variety of ideas inc moth days in the village	One girl was adamant she was going to persuade her mum not to kill moths
Did the children show an understanding of moths and the threats they face?	Very well	Quite well	Somewhat	Quite well	Quite well
Notes/Examples	Showed good awareness during discussions without too much prompting	Accurate answers when questioned about things	Most were able to recount facts, younger (Y1) children weren't as confident	Being able to come up with relevant solutions	One boy said that moths were valuable in their own right and they remembered facts about numbers of moths and other facts
Were the children curious and engaged with the topic?	Extremely	Extremely	Extremely	Extremely	Very
Notes/Examples	All those that said they didn't like moths at the beginning of the day enjoyed identifying and releasing them.	One child started the session frightened but liked moths by the end. - Time they took on their posters and including wanting to do facts	They particularly loved collecting and identifying moths. Kept their energy all day.	At the beginning only 4 liked moths at the end all apart from 2 loved moths	They were asking lots of questions and were excited about collecting moths
Number of Adults visiting	6	2	3	5	3
Number of children visiting	25	10	13	25	13

Appendix 3 -

Teacher Feedback	Storth	Arnside	Beetham	Warton	Silverdale
To what extent did pupils express confidence in their ability to help protect moths after the session?	A great deal	Quite a bit	Quite a bit	A great deal	A great deal
Can you give an example of how a child showed they felt empowered to take action?	Through the group discussion - the children were very passionate about what they were talking about	Weeds/wildlife areas/lights/curtains	When collecting the leaves and flowers some children advised each other to be careful not to disturb the moth habitats. Some children said they would tell their parents about turning off the lights.	By discussing examples of how to reduce light pollution by using different lights. 2 - Suggesting planting more pollinating plants	It was wonderful to see the children so engaged and so motivated
How well did pupils demonstrate an understanding of the threats facing moths?	Very well	Quite well	Quite well	Very well	Very well
What Knowledge or ideas did the children share that showed they had learned something new about moths or their habitats	They talked at length about habitat and the different moths they could potentially see in the local area	Recall of answers/quizzes/ general knowledge	Linking the new learning to their previous learning about butterfly life cycles. Asking questions about the threats to moths like 'what might eat them'?	That hedgerows were being taken out to build houses, reducing their habitats.	How the habitats are becoming endangered
How engaged and interested were children during the session?	Extremely	Extremely	Extremely	Extremely	Extremely
Did you notice any change in children's attitudes towards moths?	Reduced fear - those that were unsure were holding moths at release time.	Lots of questions - Good concentration, Good variety of activities. - "We should write to someone like an mp" - excellent venue	Definitely curiosity and fascination with the moths and all the different shapes and colours. They were very interested in identifying the moths using the guide books.	Total Change of attitude as they had not really thought about how important moths are before.	Respect, Perseverance They were great (with regular breaks). Emily and Emma were brilliant. Such good teachers. Excellent activities, thank you :)