



INFORMATION PACK

FOR TEACHERS AND VISITORS

EDUCATIONAL INTERACTIVE EXPERIENCE

 **WESTLAKES
SCIENCE PARK**

Owned and operated by  **BEC**

Welcome...

to the Westlakes Science Park STEAM Trail. We are delighted that you have chosen to visit our educational and interactive outdoor experience, commissioned and supported by the team at BEC, in partnership with Sellafield Ltd.

This handy guide has been designed with teachers in mind but it also contains information that will be helpful to other visitors too. It will help you get the most out of your visit, so for best results, please read it before you arrive onsite. The booklet can also be referred to during your visit and contains helpful hints and tips for you and your students. Please do not hesitate to contact the BEC team, on 01946595200, if you have any queries about any of the information in this booklet or about the STEAM Trail itself.

ABOUT THE WESTLAKES SCIENCE PARK STEAM TRAIL

The STEAM Trail has been designed to give your students an understanding of how STEAM subjects are part of our daily lives and how they are represented within the organisations that are located on Westlakes Science Park.

Inspired by Cuthbert the Sheep, an original artwork that was painted and sponsored by children at St Cuthbert's Primary School, and purchased by BEC as part of the Go Herdwick fundraising campaign in 2016, the STEAM Trail also encourages students to explore the integral links between the arts and STEM subjects.

Working with our partners, Sellafield Ltd and our tenants on the park, we have created a fun and educational trail, combining arts, science and the great outdoors. The addition of an interactive app has resulted in a user-friendly experience for students to explore and enjoy. We have linked the content to KS2 so lots of it should already be familiar to your students and it should support and complement your classroom work. We hope that the trail contains information that your students are comfortable and familiar with, in order to boost confidence and consolidate their learning, as well as new facts that will inform and entertain. Questions and discussion points have been included to encourage independent thinking, debate and follow up activities back in the classroom.



Cuthbert the Sheep,
the first piece of
community art
installed at
Westlakes Science Park

PRACTICAL INFORMATION

Booking: Visits must be pre-booked by calling BEC Reception on 01946 595200. Please note visits are only available on Fridays.

Age range: Primarily, 7-11 year olds. Content ties into the KS2 National Curriculum. However, the trail provides a pleasant walk for under 7s and there are optional activities at the end of this booklet aimed at younger participants, or anyone that needs a less academic focus.

Distance: The trail is approximately 1km long.

Duration: Approximately 60-90 minutes.

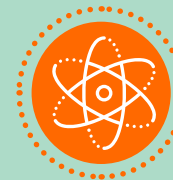
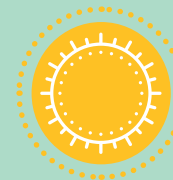
Parking: Parking is available in the car park after the junction at Ingwell Hall on Ingwell Drive (signposted UCLAN). For coach parking please notify the BEC team when booking for arrangements.

Registration: Please report to Ingwell Reception where a BEC team member will greet you, provide you with trail packs and walk you to the first board.

Terrain: The paths are all accessible for wheelchairs. You may need a buddy system to support wheelchair users going up inclines. The trail follows paths but sometimes your group will be walking across grass. Please make sure that you have suitable footwear, especially during periods of wet weather. At certain points, the trail passes through car parks and areas where there may be moving vehicles. Please take care at all times. The trail also runs alongside a pond which has no barriers. The trail has been risk assessed and further information can be made available.

Recommended group number: Maximum of 15 per group. (A class can be divided into two groups of up to 15 students).

Toilets: Male and female toilets are located in the ground floor Bassenthwaite Pavilion building (canteen) and are clearly marked on the map. Disabled toilets are also available there, on the right hand side as you enter.



HOW IT WORKS

The STEAM Trail is made up of 6 boards with information relating to STEAM subjects, including links to life on Westlakes Science Park. The boards are clearly marked on the map – see pages 6 & 7.

Each board is themed and has information and interesting facts relating to its subject.

WIND ENERGY

ELECTRICITY

SOLAR POWER

PHOTOGRAPHY

NUCLEAR ENERGY

WATER CYCLE

The STEAM Trail has been designed to work in conjunction with the The STEAM Trail App that can be downloaded from Google Play & iTunes via steamwestlakes.com or scanning the QR code.

Once onsite, you will be provided with a number of iPads to use whilst on the trail. The app has a series of questions that relate to each board. Once you reach a board please select the corresponding icon and you will be asked 4 questions. Participants must seek out the answer on the board and select the right answer on the screen. Questions are multiple choice. The app will tell you if you answered correctly or incorrectly. If you answered correctly, you will be given the next question. If you answered incorrectly, you will be given the option to answer again until you get the question right. You can't progress to the next stage until you have answered all the questions correctly. The app has been designed to include a rolling set of questions, so you will not get the same ones every time. This allows for multiple visits to the site.

There are also optional activities that can be included in your trail depending on the age and ability of your group – see pages 10 & 11.



Get the app!



STEAM trail app
available for free
download from
Google Play
and iTunes

STAGGERED START

We recommend that you have no more than 15 students in a group. If you have multiple groups of 15 we have designed the trail to provide a staggered start. All groups will assemble at BOARD 1 (see map) and listen to the introduction and health and safety housekeeping announcements. Group 1 will then set off on the trail and follow the trail. Group 2 will stay at BOARD 1 and the teacher / group leader will lead a discussion with the pupils about STEAM. Please see P9 for a list of suggested questions that you can use. After 10 minutes of discussion, group 2 should now start the trail.

Group 1 should reassemble at BOARD 1 at the end of the trail. As they wait for Group 2 to catch up the teacher can lead the discussion using the suggested questions on Page 9.

INSTRUCTIONS

- 1 **Arrive onsite and register at Ingwell Hall Reception.**
- 2 **Assemble at BOARD 1.**
- 3 **Divide party into 2 groups if there are more than 15.**
- 4 **Hand out iPads. Pupils will need to share. This encourages collaboration.**
- 5 **Use BOARD 1 as a prompt to introduce the group to the trail.**
- 6 **Remind them what STEAM is and what subjects are covered.**
- 7 **Start a discussion (see example questions on page 8) about the park with the group.**
- 8 **Use 'The Trail' section on BOARD 1 to talk about the trail and explain what they have to do.**
- 9 **Use the dos and don'ts section to talk about the safety aspects and any required behaviour. Feel free to add in any other practical information here that you want to highlight to your group.**
- 10 **If you have two groups, explain the 'staggered start' (see above)**
- 11 **Remind the pupils that they are on a working park and to respect their surroundings. They will see people who are going about their working day. Ask your pupils to think about what sort of jobs they might be doing.**
- 12 **The trail should take approximately an hour but this will depend on the ability and organisation of your group. Please keep an eye on the time and keep the group moving – especially if you have opted for a staggered start.**
- 13 **Explain any optional activities (Pages 10 & 11).**



STEAM TRAIL MAP



STEAM TRAIL MAP KEY

- Route
- ▶ Direction
- X Road / Car Park Crossing
- T Toilets
- Pond
- Wind Energy
- Electricity
- Photography
- Nuclear Energy
- Water Cycle
- Solar Power

STEAM INTRO



DISCUSSION QUESTIONS

If you have opted for a staggered start, there is an opportunity for 10 minutes of discussion time at the beginning or end of the trail.

Here are some suggested questions and themes to talk about.

The questions / discussion themes can also be used during the trail as you move from board to board. Ask your students to keep an eye out for buildings with interesting shapes, clever design features and unusual patterns or materials. Highlight the point that creativity goes hand in hand with science and is an integral part of STEAM.

What sort of jobs do you think people do on Westlakes Science Park and what skills might they need to do these jobs?

What jobs do your family members have and do any of them work on the park?

What sort of jobs would you like to do and what skills are needed?

Creativity is needed in all job roles and industries. How do you think it is represented here on Westlakes Science Park? Where can you see evidence of creativity? How is it linked to the different industries?

How can art and creativity help us in our daily lives?

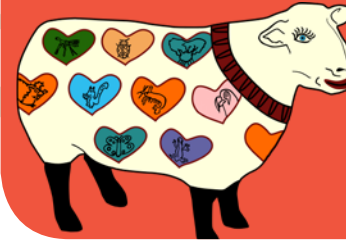
What role does art play in traditional science, technology, engineering and maths activity?

These themes and discussions can be continued back in the classroom as part of follow up work.

HINTS AND TIPS

WHERE'S CUTHBERT?

Look out for our mini Cuthbert markers along the trail to keep you on track.



KEEP ONE EYE ON THE CLOCK

The trail should take approximately an hour but this will depend on the ability and organisation of your group. Please keep an eye on the time and keep the group moving – especially if you have opted for a staggered start.

SPACED!

The boards have been placed in appropriate areas of interest, rather than being evenly spaced. There are 3 boards in close proximity to each other, all located around the pond. You will need to ensure the groups visit each board in order and do not run ahead – especially if you have opted for a staggered start.

WHATEVER THE WEATHER

Due to the use of iPads, the STEAM trail should not be attempted in wet weather as this will damage the equipment. Your point of contact will advise you upon arrival.

The trail is a mix of paving slabs, gravel and dirt track areas however participants may be walking or stood on the grass. These areas may be wet. The trail is exposed. On sunny days there is very little shade. Pupils are advised to wear sunscreen.

FOOD AND DRINK

The trail only takes an hour so there is no need to take food or drinks around with you. If it is a particularly hot day, you may wish pupils to carry water bottles.

Please ensure that any litter is disposed of properly.

TOILETS

Toilets are located in the canteen next to Ingwell Hall.

Please ensure that students use the facilities at the appropriate time. Please note that there are no toilet facilities at the start or end of the trail.

OPTIONAL ACTIVITIES

BRASS RUBBING

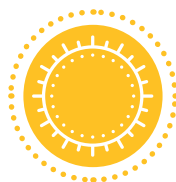
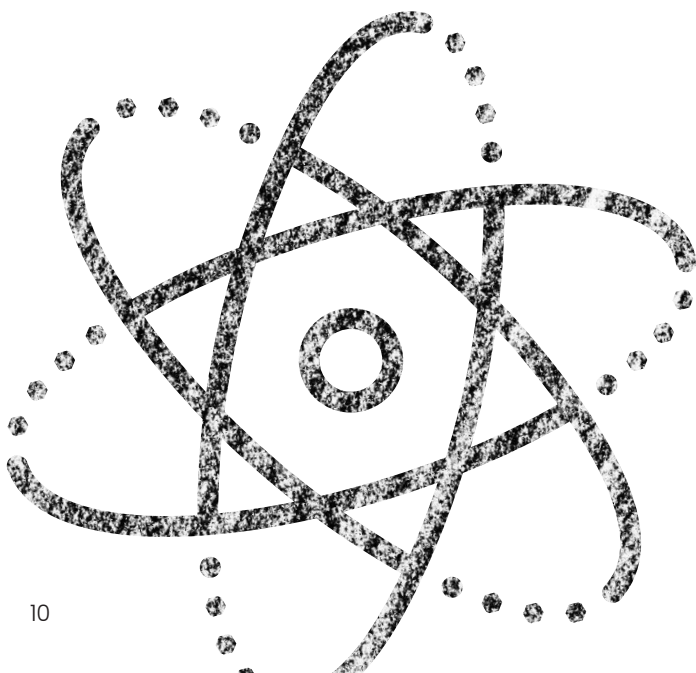
In addition to the STEAM questions, each board has a themed brass rubbing on each post. Collection grids can be downloaded and printed off by visiting steamwestlakes.com

This activity can run alongside the STEAM Trail App. You can nominate someone in your group to collect the rubbings or get pupils to take turns at each board.

OR

Depending on the age or ability of the group, the brass rubbings can be used as an ALTERNATIVE activity to the questions. This activity might be particularly suited to younger participants or those who may need a less academic focus.

Wax crayons are the best thing to capture the rubbings. Please bring some with you or ask at Reception upon arrival.



CUTHBERT LETTER COLLECTION

Watch out for the Cuthbert mini markers dotted along the trail. Each one has a letter assigned to it. Collect the letters and rearrange them to make a STEAM related word.

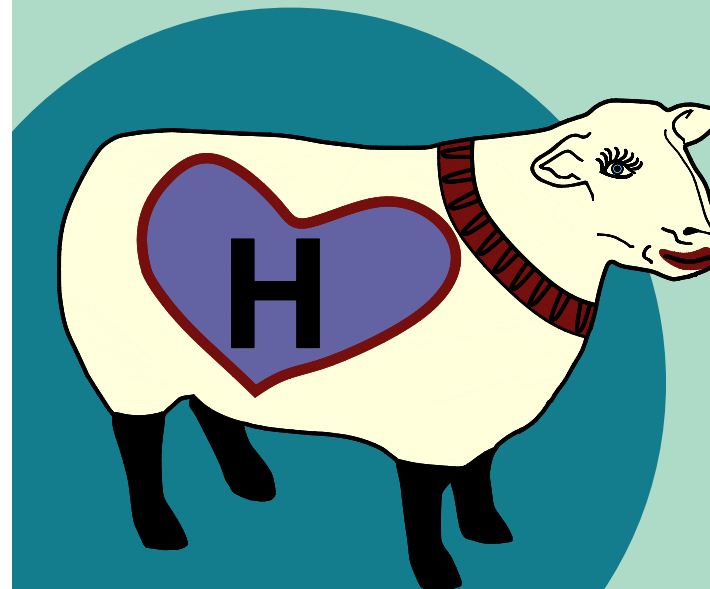
You can write the letters here:

WHAT WORD DO THEY MAKE?

This activity can run alongside the STEAM Trail App.

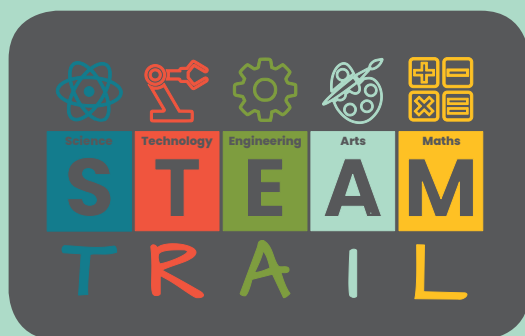
OR

Depending on the age or ability of the group, the Cuthbert Letter Collection can be used as an ALTERNATIVE activity to the questions. This activity might be particularly suited to younger participants or those who may need a less academic focus.



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**Your contact onsite is the Reception at Ingwell Hall
In an emergency please contact Reception 01946 595200**

Supported by:



Planned and developed by:

