

# **Inquiring Science Project Report**

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Advisory board: Rod Cunningham, Lynda Dunlop, Steve Bramall

## **Introduction**

The Inquiring Science project is funded by Ron Zimmern and the PHG Foundation. It is based at Hughes Hall, University of Cambridge, as part of The Bridge Centre for Research Translation and Oracy Cambridge, the Hughes Hall Centre for Effective Spoken Communication.

The rationale for the project is to develop resources for teaching the philosophy of science to primary school children, through primarily discussion-based classroom sessions. These resources were, and continue to be, developed iteratively in collaboration with classroom teachers and other experts. When the resources have been trialled, they will be disseminated to SAPERE (the Society for the Advancement of Philosophical Enquiry and Reflection in Education<sup>1</sup>) as part of their national Philosophy with Children programmes.

Our research aim for the project is to investigate if the Inquiring Science sessions ‘inoculate’ children against online disinformation and ‘fake news’. This has been a high-profile issue in recent years, with governments globally attempting to lessen the impact of fake news through legislation, education, or both.

Therefore, our research project has also developed a test of internet literacy, including online disinformation, to be administered before and after the intervention sessions. The test is taken by children individually and in groups of three. We measure the changes in both sets of scores, but also analyse video recordings to ascertain if the dialogue in the group tests improves children’s scores compared to the individual tests.

This report covers our activities to date, including our preliminary findings from our pre-tests and observations in primary schools. We also report on the next phase of the project, including planned and promising dissemination activities.

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<sup>1</sup> <https://www.sapere.org.uk/>

## Project timeline: activities to date

April 2019 – September 2019

**In May and June**, exploratory discussions were carried out with Ron Zimmern, the advisory board, and teachers, head teachers and science coordinators in four primary schools. Although these were scoping conversations to shape the resource materials, all four schools wanted to participate in the trial. Another school was added to the trial after expressing interest following the Oracy@Cambridge conference.

Practitioners advised on a number of points to develop the resources. Several reported that their schools ‘block’ science, concentrating a topic into a short period of time. They advised that there would not be enough time during this block to teach all of the Inquiring Science sessions. However, these schools were happy to teach the sessions during PSHE.

There were also comments about the need for links to the science curriculum. Practitioners wanted sessions which linked to the curriculum, and as a result we looked at how the sessions could fit within the Working Scientifically criteria of the National Curriculum. Two practitioners also asked about linking or extension activities, and so we decided to investigate the possibility of an Inquiring Science website which could have additional activities, as well as allowing those taking part in the trial to share experiences and maintain contact.

**From July to September**, Inquiring Science resources were developed and carried out following a review of science education literature, Philosophy with Children literature and online resources which aim to address the issue of disinformation and fake news.

There are 10 sessions, comprising the following topics, connected to a learning aim:

Topic	Learning Aim
Ways of knowing	I can think about how I know different things
Abductive reasoning	I can think about how to work things out through observation
Inductive reasoning	I can think about how patterns help me to work things out
Authority	I can think about who is telling me to do something and why
Decisions using evidence	I can think about how people work together to solve problems
Questions	I can think about what kind of questions can help me to find out information
Finding evidence for claims	I can think about how to prove something using evidence
Assessing evidence	I can think about how to check sources of evidence
Reporting information	I can think about how to report information to others

We produced a resource book for teachers with stimulus stories, session plans, photocopiable resources and additional posters and material for classroom displays. This included ‘Science Boxes’ which connected the theme of the Inquiring Science session to

issues in science more generally, and also provided a glossary and vocabulary list to form a science 'working wall' in the classroom. An example of the trial resources can be seen in Appendix 1.

#### October 2019 – December 2019

**In October**, teachers received training for the Inquiring Science resources as part of a two-day SAPERE Level 1 training course. All of the teachers were trained together by Neil Phillipson, and the last part of the training course comprised an introduction to the Inquiring Science resources, given by Laura Kerslake and Neil Phillipson, and an inquiry which was carried out by the teachers using the resources.

**In October and November**, we carried out pre-tests in schools. Each participating child took two tests: one individually, and one as a group of three. This was based on Wegerif's *et al* (2017) previous work on carrying out tests in this format. We video recorded the group test to be able to analyse language, and to ascertain if the group tests (in which children discussed the questions) showed difference to the individual tests (which were done without input from others). We devised two equivalent tests, example questions from which can be seen in Appendix 2; class teachers administered the individual test and Jude Hannam and Laura Kerslake administered the group tests.

#### January 2019 – present

All schools are continuing with the trial and have each taught a number of sessions. **During January and February**, Jude Hannam arranged a visit to each school to observe a session (videoing where possible) and to gather feedback from teachers and any samples of work.

**From December** onwards we began to analyse the group and individual pre-tests: the next section presents our initial findings.

### **Findings from pre-tests**

We will carry out comparative analysis once we have completed the post-tests; here are our key findings related to online literacy from the pre-tests, which show the characteristics of the children's answers in the individual and the group test.

#### **1. Children do not value the internet as a source of information above other sources**

Children were presented with a statement, and asked where they would look for further information to find out if the statement was true. They were presented with five options: a friend, parents, the internet, a teacher, and books. They were asked to rate each as a source of information between 1 (lowest) and 10 (highest).

Friends were rated low because, as one child said, “they probably won’t know about that”. In the individual tests parents ranked higher than the internet, with an average score of 6.90 for parents and 6.55 for the internet. This figure includes all of the Year 3 and Year 5 data, but was more pronounced in favour of parents when looking at Year 3 data alone. This might reflect children’s reliance on their parents at this age, and their comparative lack of experience with searching for information on the internet. However, even if this is the case, it indicates that the influence of parents is a considerable one: cases such as the statement asked here might be innocuous, but the strong influence of parents on children’s thinking may factor considerably. In Philosophy with Children session run concurrently with this project, one of the session leaders summed this up by saying: “you know you’re talking to the child, but you feel like you’re talking to the parent”.

## **2. Children relied on prior knowledge rather than evidence from information given**

In one question, children were asked to read three short pieces of information. In the group test, these were about driverless cars. Some information was presented in all three stories, some in two stories, and some in only one. Then children were asked to rate on a scale between one and ten whether or not they thought four different statements based on the given information were true. The information that driverless cars were not on the road right now was given three times, and we would expect a low score for the statement ‘Driverless cars are on the road today’. However, a several children said that they had seen driverless cars and so did not refer to the information but on knowledge they thought they had, and so scored much highly. This trend was seen in all of the questions in which children were asked to use sources of evidence to answer the question.

## **3. Children found it difficult to identify facts and opinions**

Some of the sentences deliberately included both fact and opinion, for example “On Friday, three brave astronauts blasted off into space”. In these cases, children found it difficult to decide what to underline and what to not. Notable is one child who stated that “adjectives tell you when it’s an opinion”, which proved to be a sound strategy for deciding what to underline.

## **4. Children’s personal beliefs affected their answers**

One question presented a short opinion text about how the Harry Potter books were boring. Children were asked to identify what the books were trying to make them think, and also to underline the opinions in the piece. Children’s ability to answer this question correctly varied depending on their beliefs about the books. Those who didn’t like them (“I’ve never read them”; “they *are* boring”; “I don’t like boy stuff(!)”) were more likely to correctly identify that the passage was trying to make them think that the Harry Potter books are boring. Those who were enthusiastic about them, however had much more trouble. One child vehemently said “No!” when asked to circle that answer by another in her group,

before grudgingly circling the correct answer. Another child completely refused to circle the answer that they were boring because she liked the books so much, commenting “I know it’s the right answer, but I’m not circling it”.

## **5. Group work strategies were variable**

Children worked in groups to discuss questions and decide on an answer together. Some children decided to use strategies such as: ‘two against one’; choosing an average of the answers (when selecting a number on the rating scale); one child taking the lead and deciding how to answer; children acknowledging they didn’t know and choosing to guess

## **Feedback from participating schools**

At the training day we stressed that this was the first trial of these resources, and so any feedback which was positive or negative would help us to revise the resources. Teachers were asked by email to provide any feedback they have to share at points throughout the trial, and Judith Hannam asked the teachers for feedback when she visited each school.

### **Positive**

#### **Here is a selection of comments from practitioners themselves, or from notes typed after a conversation with the teachers**

“[The teacher] is able to follow the lesson plans clearly in the book we were given and the smart notebooks which she has created...the children love the talking rule and the opinion line. They love having the opportunity to discuss and share their ideas and opinions 😊. So really positive so far!”

“Children are asking more questions in science. They are more independent because they have realised it is ok not to know so they try for themselves before asking the teacher, ‘Is this right?’”

“Class loved the robot question in lesson 1. Also loved two truths and a lie which teacher linked with electricity”

“[Teacher] loved first session and science came out of it really naturally”

“[Teacher] loved the resources – felt they were well presented, engaging, easy to follow and drew out interesting thoughts from the children. Also enabled her to prepare lesson quickly and efficiently. Saw its relevance to PSHE/History/English/Maths.”

“The head teacher came in at the end and commented on how impressed she had been with the children’s listening behaviour when she had videoed a previous session as they had been seen as quite a chatty/disruptive class before.”

“Children are getting a better understanding of what being a scientist entails and are beginning to refer to some of the key vocab and use it in other contexts.”

“[The class] have been applying the resources across the curriculum e.g. Abductive and Inductive reasoning came up in History lesson looking at evidence and research into the Romans – they are not necessarily believing the first thing they see.”

“[The class are] using the conversation and talk rules regularly outside of Philosophy lessons.”

“Children have great recall of each session – really remembering them. Love how it drops fundamental things into their heads almost without them knowing.”

One school put photographs and a quote on Twitter: [The class] were engaged, insightful & creative when they responded to @InquiringScien1 cross-curricular science-based philosophy. Lots of cross-curricular themes emerged from the sessions with F1 able to empathise & debate a particular point of view with passion & conviction.



**Comments from children following the Inquiring Science session on authority, when asked by their teacher what they had learned in the session:**

I learnt that you read to check first instead of going with it

I learnt that if someone said do that don't just go with it

I learnt that disagreeing is ok

I learnt that asking questions is a great way of finding out about things

I learnt that you first need to test before saying

I learnt what authority means – it is not always good to trust what you hear

You need to ask a lot of questions to be sure. And don't agree first time

I learned that information is important for questions

I learnt that other people don't always have your ideas

## **Summary of positive aspects of the sessions**

- Children have enjoyed the sessions and have engaged with the resources
- Teachers have noticed that children's listening has improved during the sessions
- Teachers have connected the sessions to science education and have seen relevance to other curriculum areas
- The resource book and supporting materials are liked by teachers and they are useable for delivering the sessions
- Children have been eager to discuss their ideas both their ideas and during science, for example asking more questions in science

## **To develop**

One teacher felt the science box was rather dry for children and as a closing stage of the lesson lacked the engaging qualities of the earlier stages. Another teacher felt that it sometimes 'went over the heads' of some of the children. Several comments from teachers indicated that the science box didn't fit well with the sessions.

One teacher felt that one session on each of these concepts (e.g. inductive or adductive reasoning) is not enough and it needs to be revisited for it to become embedded.

One teacher noted that that the more able children are noticeably better able to be critical than those of lower ability.

One class found the opinion line difficult in behavioural terms

One teacher would have liked some key questions to ask to move sessions on

## **Recommendations based on the development points**

- Technical issues and budget constraints meant that it wasn't possible to develop anything more than a basic website for the project. Many of the teacher's development points relate to the provision of extension materials to develop session content further, or to provide more support for the sessions. Suggestions included:
  - Examples of session starters which could be used as warm-up activities for children to practice specific skills such as listening to others, building on ideas
  - Extension resources linking the sessions further to specific content in the science curriculum
  - An online image bank to support the stories in the sessions
  - Video resources which could be used to support the children's understanding of the concepts for discussion – perhaps to act as a stimulus for younger children

- Additional resources which help to embed critical discussion would also be useful to help a range of children to develop these skills prior to or alongside the Inquiring Science sessions
- The Science Boxes should be revised to fit better with the science curriculum and their place in the sessions considered – for example one teacher suggested using them at the beginning of the sessions and then again at the end. It might be that if additional materials to follow on from the sessions were developed then the science box wouldn't be needed, or there could be a change in format and content.

## Dissemination activities

**In January 2020** Laura Kerslake wrote a blog for the Oracy@Cambridge website reporting initial findings from the pre-tests, with a particular focus on the role of oracy in helping children to identify fake news and develop digital literacy. A researcher from BBC Bitesize contacted Laura and asked if we would be part of a new fake news BBC Bitesize campaign which will launch in April 2020 – plans for this are ongoing.

**We are currently** writing a proposal for the EARLI (Education and Research in Learning and Instruction) conference. Every two years, the SIGs (Special Interest Groups) within EARLI hold their own conferences. Rupert Wegerif is Chair of SIG 26, focusing on Argumentation, Dialogue and Reasoning, and in August 2020, this SIG will hold a conference in conjunction with SIG 20 (Inquiry Learning). The theme of the conference is 'Tools of Inquiry and Argumentation to tell Fact from Fiction'

**On 15<sup>th</sup> May 2020** we will hold the Inquiring Science conference at Hughes Hall, bringing together speakers from the world of education practice, academic research, journalism, Philosophy with Children and policy. We are very pleased to have the teachers who have taken part in the trial share their experiences with us and other teachers. The conference will report on the Inquiring Science project, but also consider issues of how young people engage with online information. Therefore, the title of the conference is: **Connecting Education: Fake News, Science Teaching and Critical Literacy**. It will be free to attend, and full conference details can be found in Appendix 3.

**We are planning** two initial articles, one for an academic journal and one for IMPACT, the Journal of the Chartered College of Teaching. The latter article will focus on insights from the project that would be of interest for practitioners – for example children's attitudes toward online information, their strategies for discerning fact from opinion and how their prior knowledge and beliefs affect what they read when new information is presented.

**In September 2020**, we will be conducting an Inquiring Science workshop in Zurich as part of the ThinkingEd conference, organised by Alex Black of ABC Learning and Foundations for Learning.



## Next steps

### Project timeline activities

The post-tests and data analysis will be completed by the end of April 2020. Following this, the materials will be revised **between May and August 2020**.

**In September 2020** the revised materials will be disseminated to SAPERE and used as an add-on to their Level 1 course. **Between September 2020 and April 2021**, we will make contact with teachers who are using these resources in their classrooms, conducting pre- and post-tests and/or classroom observations and collecting feedback from teachers.

**After April 2021**, we will carry out an evaluation of the project.

### Future directions for the project

We are looking for funding sources to develop the project in two directions:

#### *1. Developing and researching a more comprehensive science resource package*

Background: Feedback from teachers indicated that the resources were engaging for the children and helpful for developing thinking and discussion skills in science and across the wider curriculum. However, teachers also indicated that the resources would be more effective if there were opportunities to embed them into the curriculum, particularly in science lessons. Currently, there are 10 sessions, each of which provides one exposure to a particular topic, but this offers limited scope to integrate more fully with the science curriculum.

Activities: We would like to develop a website which has additional activities which are linked to specific topics in the science curriculum. We envisage that teachers could then teach the relevant Inquiring Science session as an introduction to a topic, which would be revisited in further sessions throughout the topic using our more comprehensive resource base. This would enable the Working Scientifically criteria to be embedded in the topic, integrating the two aspects of the primary science curriculum.

#### *2. Developing and researching an online critical literacy test*

Background: The test produced for the Inquiring Science trial was paper-based due to time and budget constraints in developing an online version of the test. The test includes the following aspects of critical literacy: identifying bias, identifying fact and opinion, using evidence from sources, identifying good sources of evidence, and identifying sensationalist headlines. The National Literacy Trust produced a report in which only 2% of children could

correctly identify real news from fake. A high proportion of children did not feel confident in their abilities to recognise when news was fake.

Activities: We would develop an online critical literacy module which could be taught in ICT lessons in schools (there is scope to develop this at primary and secondary level). This would be based on three elements: a review of current practice for developing online critical literacy (currently mainly US-based); our findings from the Inquiring Science project; and research into aspects of the curriculum in which these skills are already developed (for example, evaluating evidence in history). We would also develop tests to be carried out pre- and post-module, allowing teachers to assess children's ability and confidence in finding, analysing and evaluating online information.

## **Other activities**

We are currently applying for funding from the University of Cambridge Creative Encounters programme. If successful, this will enable us to work with a creative to produce a short video to engage with current and new audiences and disseminate our work in a new way.

Alex Black, from ThinkingED, expressed interest in Inquiring Science as a resource for the primary IB programme in Swiss International schools. We have had an initial phone call to discuss how the resources could be introduced to these schools and extend the research project.

**For more information about the Inquiring Science project or anything in this report, please contact Laura Kerslake: [laura.kerslake@hughes.cam.ac.uk](mailto:laura.kerslake@hughes.cam.ac.uk) or Rupert Wegerif: [rw583@cam.ac.uk](mailto:rw583@cam.ac.uk)**

## Appendix 1: Example resources

### Session 5—Wonky Sheep

At break time, Mr Robins' class were doing what they usually did: eating snacks, playing football, climbing on the adventure playground. But not Ama. She was standing by herself in a corner of the playground with her arms folded. Suddenly, she kicked the bench she was standing next to. Hard. She wished she hadn't, because it really hurt, but she was so cross.

Her attack on the innocent bench had got the attention of some of the other children. "What's up, Ama?" asked Karl kindly. "My sister" grumbled Ama. "She told me another one of her stories this morning. And as usual, I believed her. But she just made it up! And she laughed at me! I felt so silly"

"What was the story?" asked Bertie

"She said that when sheep live where it's hilly, their legs on one side of their body grow longer so they can keep their balance on the hill"

Bertie thought about it. "Well that kind of makes sense" he said. "I can see why you believed her."

"No it doesn't!" broke in Karl. "That would only work if the sheep always faced the same way. And what would happen if it ever came off of the hill? It'd be wonky!"

Ama wasn't in the mood. "I *know*, Karl" she snapped. "But Bertie is right too. It did kind of make sense. And she just has this way of sounding so believable".

"Well, when she tells you something, just don't believe it" said Bertie. "I can't", answered Ama, "it's not like she always makes things up, and she knows way more than I do, so it could be true".

The bell rang then, and Bertie and Karl walked back to their classroom with Ama. 'You know, Ama', said Bertie, "you need to start working out what questions you can ask your sister so that you can catch her out next time she tells you one of her stories".

"Yeah!" said Karl. "We can help you at lunch time, if you like". Ama brightened. She was definitely going to figure out a way not to fall for her sister's made-up stories again.



## Teacher information

**Learning Aim: I can think about what kind of questions can help me to find out information.**

This story asks children to think about how to question what they have been told. In the scientific community (as in other communities of investigation) studies might be peer-reviewed or other studies done to replicate findings. But in a digital age where children will be presented with an abundance of information, developing strategies to question what they read and hear is important, so they are better able to work out what is reliable information and evidence and what is not.

## Session plan

Whole class activity:

Read the Wonky Sheep story

Discussion – ask the children to think of questions that Ama could have asked her sister. They can write these on post it notes, or come up with questions in pairs. Discuss what makes a good question, and what information different questions can tell you.

Small group activity:

Tell the class you're going to play 'Two truths and a lie'. Give them three statements, two of which are true and one of which is a lie. They have to decide which is which. They can be about anything – either personal to you (My favourite food is..., I have four cats, my favourite book is... etc.; or about anything else). Have the statements up on the board. You could also prepare these statements on paper to give to each group to write their questions on.

Divide the class into groups of 4. They have to come up with questions to ask about each of the statements to help them work out which is true and which is not. They should spend some time thinking about what they could find out and deciding as a group which would be good questions (e.g. what are the names of your cats). You could also give the children question stems to help them (i.e. what, when, where, why, how).

Whole class activity:

Members from each group can ask their questions about each statement. Allow more whole class discussion time so they can use all of the information to make a decision, and vote on which one they think is a lie.

Plenary:

Read the Wonky Sheep Science Box to the class

Extension activity:

You can play another round of 'Two truths and a lie', either coming up with more statements yourself, or by nominating a member of each small group to do so.

## Resources

Wonky Sheep Science Box

## Questions to stimulate discussion

Why did Ama believe her sister?

How can we tell the difference between true stories and fake stories?

Do you think Ama would have believed the story if she read it on the internet?

## Appendix 2: Example test questions

Q2) Read the story:

On Friday, three brave astronauts blasted off into space to visit the space station. The sight was amazing as the huge rocket left the earth. The astronauts will spend 87 days in space, living together on the space station. They will carry out tests in space and go on a spacewalk. Who knows what they might find while exploring the creepy darkness of space.

This story contains facts and opinions.

Underline the facts in this story.

Q6) A story in the news has the title "Pizza is good for you". But you don't know if it's true. |

What are the best ways to find out more? Circle one number for each answer. 1 means not a good way, 10 means a great way.

Ask your friend

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Ask your mum or dad

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Use the internet to find more stories that tell you the same information

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Ask your teacher

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Find a book about healthy food in the library

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Q8) Here are the headlines from three different stories:

**Best football match ever played**

**Football news: final score 4 – 0**

**Disaster for football club**

Which story would give you the best information about what happened in the match? Circle the headline of the story you choose to read.

Q9) Read these two stories. The question is: should a new airport be built?

YES

The new airport will be amazing for local people. They will be able to travel to many more places. The airport will also mean lots more jobs for people who live here.

NO

The new airport will be a disaster. Many kinds of plants will be destroyed, and animals will have no home. The noise will be terrible for local people.

What would be a good thing to do next? Circle a number for each answer. 1 means not good, 10 means great.

**Build the airport**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

**Not build the airport**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

**Get everyone to talk to each other about the problem**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

**Find out more about the animals and plants**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

**Find out more about what local people think**

1	2	3	4	5	6	7	8	9	10
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## Appendix 3: Conference information



### Connecting Education: Fake News, Science Teaching and Critical Literacy

#### The Inquiring Science Conference

Friday 15<sup>th</sup> May 2020, 1pm – 6pm

Pavilion Room, Hughes Hall, University of Cambridge

How can young people be supported to engage with online information effectively?

How can science teaching help children to develop these skills?

What are the advantages of a discussion-based approach to these issues?

#### About the conference

Being able to use the internet as a source of information is a vital skill for young people in today's world. Yet the issue of fake news and access to large quantities of 24-hour information means that a high percentage of children do not trust the internet and aren't confident in their abilities to recognise fake and real news<sup>2</sup>.

Critical literacy – being able to question, discuss, and evaluate information – is key to being able to use the internet safely and effectively. The Inquiring Science project examined how science education can teach children these skills by discussing philosophy of science questions, which we connected to the Working Scientifically criteria in the primary National Curriculum.

Across three sessions, we'll look at education in the internet age, report on the Inquiring Science project, and explore teaching and learning strategies to help young people develop the skills they need to confidently engage with online information.

This conference is for anyone who is interested in science teaching or promoting safe, effective use of the internet in the classroom and beyond.

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<sup>2</sup> National Literacy Trust, 2018, Fake news and critical literacy: Final report

**The conference is free to attend, and refreshments will be provided**

**To attend, you must register your attendance here:**

<https://connectingeducation15may.eventbrite.co.uk>

**Contact Laura Kerslake ([laura.kerslake@hughes.cam.ac.uk](mailto:laura.kerslake@hughes.cam.ac.uk)) for more information**

## **Conference Programme**

### **Session 1: Education in the Internet Age**

This session looks at some of the issues facing young people in a world where technology plays a huge role in the classroom and beyond. The internet has great potential to support teaching and learning, but the way that young people engage with online material needs to be considered so that they have the confidence to make judgements about what they read or watch.

### **Session 2: The Inquiring Science project**

We will report on the Inquiring Science project as a tool to help young people to develop the skills to critically engage with online material through science discussion. We researched how this impacted on a number of skills, including identifying bias, evaluating sources of information, and telling fact from opinion. We'll have presentations from the teachers who took part in the sessions and look at the resources used in the sessions.

### **Session 3: Classroom Strategies for Internet Literacy**

This is a workshop session where we'll look at teaching and learning strategies to help young people use the internet effectively. We'll share practice and ideas, and look at ways in which approaches such as group discussion and critical literacy can help young people to develop these skills. We'll also look at how this can be integrated into the busy curriculum and connected to other subjects.

13.00 – 13.15: Arrival, Registration and Coffee

13.15 – 14.30: Session 1: Education in the Internet Age

14.30 – 16.00: Session 2: The Inquiring Science Project

16.00 – 16.15: Break

16.15 – 17.45: Session 3: Classroom Strategies for Internet Literacy

17.45 – 18.00: Networking and questions





