

Ideas for Potential Development

Conference regularly. Link up for particular aspects of work where a larger group of children (or adults) is needed. Possible activities:

- Shared reading activities, reading a playscript together
- Investigations
- Shared tasks for gifted and talented children
- Joint staff meetings - with or without a visiting speaker
- Sharing resource ideas - seeing them in action
- Joint planning. Video conferencing is like a 'visual phone-call'!

Ways Forward

Children's ideas for further development:

- We could share work
- We could show new equipment and how it works
- Do Literacy and maths together
- Exchange ideas on the same topic
- We could show a playground game or song
- Share similar interests.

Penny Burnside, Tipton St John Primary School

2.

Collaboration between two small primary schools using video conferencing

Schools Involved:

Branscombe Primary School, Devon
Farway Primary School, Devon

Background: Branscombe and Farway are two small, rural, East Devon primary schools, each with less than 60 pupils on role. First, the use of video conferencing to support collaborative work between the two schools was explored. After a number of familiarisation sessions for staff and pupils, including both schools linking to the Ocean Institute in California, six-week programmes were planned for Key Stage 1 and Key Stage 2 which incorporated regular video conferencing sessions for all pupils.

Aims:

- to familiarise the children with the concept of video conferencing
- to accustom pupils to talking freely with other pupils from the linked school
- to gain experience of presenting work to different audiences
- to share and exchange ideas with other pupils studying the same topics

Curriculum Context: Key Stage 2 science

Planning, Research and Preparation:

Originally we decided to work together on a humanities project titled 'Our Village'. This was a twenty-minute session with five pupils in each school. The pupils had previously researched the history of the school and written notes.

They talked about their school today and compared and contrasted the two schools. They discussed people's jobs within the school and the facilities they had, their favourite lessons and extra curricular activities. The pupils from Farway School had made models of buildings in the village in design and technology lessons, which they had lit up using electrical circuits made in science lessons. They showed the models to the Branscombe School pupils using the camera's zoom facility. The Farway School pupils had prepared questions for the Branscombe pupils and there was also a time for spontaneous questioning, although the pupils found this difficult.

Both schools also had a multipoint conference with The Ocean Institute, a marine study centre in Southern California. The children did some research about octopuses and prepared questions. Although not related directly to topics being studied in the National Curriculum, the children benefited greatly from this experience and were able to see the possibilities of video conferencing. The session lasted for an hour and the children also got a taste of what Christmas is like in California.

After a short time we concluded that our own lack of knowledge regarding the application of video conferencing was limiting our ambitions. The conferences were agreeable, fun and the pupils shared ideas and information, but we felt the need to re-draw our plans to allow for activities which would promote pupils' learning rather than just providing an opportunity to simply rehearse it. The pupils used the initial sessions to talk freely with and get to know each other; however, staff questioned whether the focus of the sessions could be extended to provide additional learning opportunities. After discussion, we decided to offer a more focused approach where the children would have the opportunity to pose questions, research answers, and generally consolidate their learning by working together.

As most of our links were timed to coincide with science lessons we decided to amend our plans to concentrate on the science topic of 'Light' (Sc4.3). We arranged for both schools to study six science objectives at the same time and each week we used the content of the science lessons as the basis for the video conference sessions:

Objective 1: To establish the children's existing level of knowledge and understanding about light. *Content:* Link to topic of space - primary and secondary light sources. Shadows.

Objective 2: To understand that shadows are created when an object blocks light. *Content:* Investigate various materials to see if light passes through. Establish the meaning of opaque, translucent and transparent.

Objective 3: To develop an understanding that dull material absorbs light and shiny materials reflect light. To explore different materials to see which are the best reflectors. *Content:* Investigate which materials make best reflectors. Do they have to be shiny and smooth? Look at reflective strips under microscope.

Objective 4: To gain a basic knowledge of how pictures are seen and interpreted by the brain. *Content:* Look at eye model. Show how the eye sees images upside down and that the brain translates these images.

Objective 5: To understand that light travels in straight lines. *Content:* Challenge the children to construct models to prove light travels in straight lines. **Objective 6:** To review and assess children's understanding of the topic. *Content:* Concept maps.

THE SCIENCE SESSIONS

For a six-week period, Key Stage 2 pupils from both schools linked for two 30-minute sessions a week to present their work to each other and ask each other questions about their science topic. Each session was relevant to a particular year group and the pupils all prepared what they were going to talk about. The sessions started with the teachers introducing the topic and either school beginning with a short presentation about what they had been investigating in class.

SESSIONS 1 and 2: Year 6 - *How We See Things*

Aim: To prove that light travels in straight lines. The pupils had investigated various ways of proving that light travels in straight lines. They explained their investigations to each other and showed models they had made.

Farway School: Year 6 children presented their work on 'How We See Things'. This was a group of seven pupils, six girls and one boy. As this was at the beginning of the topic, the pupils discussed what they already knew about light and the eye. They talked about what they wanted to find out and what investigations they were going to carry out. The pupils discussed the scientific vocabulary related to the topic. Pupils from Branscombe School explained the vocabulary - opaque, translucent and transparent. Most of the Year 6 pupils were fairly confident and they were able to question other pupils and talk to them easily. The pupils gained scientific knowledge during this session that we used afterwards as a basis for brainstorming the topic.

Branscombe School: The pupils were very proud of the models they had made and of the fact that the theory about light travelling in straight lines had been proven beyond doubt. They were very eager to explain their investigations and show the workings of their models to the other group. This was a very enthusiastic and successful session that was led by the pupils.

SESSIONS 3 and 4: Year 4 - *Light and Shadow*

Aim: to understand reflection and the difference between shadow and reflection. The term 'reflection' was discussed, as was what happens to light rays when they are reflected. The groups talked about shiny surfaces being the best mirrors. Different materials were tested for reflective ability. Pupils listened to accounts of the classwork that had been completed on this area of the topic.

Farway School: This session involved a group of six pupils. Half of the group were very confident and found it easy to communicate with the other pupils over the video conferencing link; other pupils found working in this way more difficult. The pupils had prepared their work and were able to share their previous investigation on how to make shadows with pupils from Branscombe School. This was a good exercise in using scientific language and vocabulary. The pupils shared ideas and consolidated their previous learning.

Branscombe School: The pupils in this session found communication difficult. They were daunted by the experience and this led to the exchanges being adult-led for most of the time.

SESSIONS 5 and 6: Year 5 - How We See Things

Aim: to develop scientific language in relation to the eye. Pupils studied a model of the eye and were asked to identify parts of it. They played 'Guess the Word' - retina, lens, pupil, etc. were written on large pieces of paper and the Branscombe School pupils gave clues for the Farway School pupils to guess the word.

Farway School: The group consisted of five boys who had been learning about the eye. The boys found the questioning and discussion with Branscombe School pupils difficult and they resorted to sticking closely to their prepared text. They need more practice at communicating using this medium.

Branscombe School: A good interactive session. The pupils became involved in a question and answer session in which their general knowledge was tested.

SESSIONS 7 and 8: Year 3 - Light and Shadow

Aim: To distinguish between the terms light and shadow in relation to our primary light source and artificial light. Light and shadows were discussed. Pupils considered the meaning of the terms 'opaque', 'translucent' and 'transparent' and tested various materials. They listened to accounts of the classwork that had been completed.

Farway School: One pupil who had the confidence to ask and answer questions over the video link dominated this session. Generally, the group were not able to share their learning, even though their investigation on shadows in class had interested them.

Branscombe School: This was a difficult session where conversation between pupils was limited.

Technical Issues

Farway School: Initially, there was some difficulty in receiving pictures and sound. Redialling solved the problem. The only other technical issue was that of an echo when speaking, due perhaps to the proximity of the controls and equipment.

Setting up the equipment was time consuming at first, although this improved as the sessions progressed. Using the equipment, especially the remote camera control, has also improved with familiarity and experience.

Branscombe School: Initially we had problems making a connection. There was some interference, the sound quality was variable and we had to think carefully about the positioning of the camera. We were able to overcome these problems with experience. On some occasions, however, the sound quality was not as good as it should have been.

Evaluation of Learning Outcomes

Farway School: Each year group had at least two opportunities to video conference with Branscombe School. All year groups lacked confidence in their first session. They had prepared their work beforehand and this seemed to be a hindrance as they felt the need to stick to the text! The sessions with Years 6 and 4 were the most successful, possibly due to the skills of the pupils involved. They communicated well together. Years 5 and 3 were rather timid and found it more difficult to communicate. The pupils tended to read out their work rather than discuss it with each other. They gained more confidence as time went on, but need more experience to benefit fully from this form of learning.

Branscombe School: After the initial shock and realisation that they were actually on TV and could be seen by the other school, the Years 5 and 6 pupils coped well with video conferencing. They were able to interact sensibly and ask suitable questions. The younger pupils, whose confidence and communication skills were less well developed, found discussion more difficult and the sessions became more teacher directed. Our sessions with Farway School gave pupils the opportunity to become familiar with the concept of video conferencing, but only limited opportunities to extend their learning. The pupils mainly read work they had already prepared during lessons. It became a 'show and tell' session. The better sessions were when the children talked about the models they had built. It was then that they were able to talk at length about their own work and answer questions without direction.

The distant link with The Ocean Institute was a resounding success. The pupils enjoyed the session immensely and were eager to ask questions and hear the answers. Afterwards they were able to write comprehensive reports about the link and the learning opportunities created by the session were evident.

Ideas for Development

Farway School: It has been decided to change the sessions to a more interactive format with the pupils working in mixed age and ability groups on tasks related to the science topic 'How we hear things'. It was felt that shorter sessions would be more beneficial with a short teaching slot followed by the pupils carrying out their activities or investigations. The lesson would then finish with another video link for the pupils to discuss their findings and results with each other. The pupils will e-mail or fax their work or ideas to each other and perhaps link for short periods in lunchtimes to discuss their research and how they will feed back to other pupils in the school. The timetable has been changed to enable both schools to experience their science on the same morning. Years 3 and 4 will link with Branscombe School as they are studying the same topic. Year 5 and 6 will take part in the distant link related to their topic.

Farway has not yet linked with any other schools or carried out another distant link. This will be carried out in the next half-term. The distant link will be related to the topic. It is also hoped that each school will be able to video their distance links for the other school. I am approaching the next half term's project with renewed enthusiasm and more experience.

Branscombe School: Our intention in the next weeks is to continue with a science focus on the topic of sound with Years 3, 4, and 5. A distant link with the Science Museum is planned for Year 6.

We would like to see more opportunities where children from both schools can work and learn together and also have the chance to use different methods of communication between sessions. We are considering using sessions to allow one member of staff to teach children from both schools and set challenges that can be reviewed at the next conference.

We are convinced that video conferencing sessions should form a part of normal lessons and not be an additional activity.

We plan to develop more spontaneous interaction between pupils by creating opportunities for pupils from both schools to work together to research a topic, edit their findings and report back to the rest of the group.

Angela Crawford, Branscombe Primary School
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3.

Geography and religious education video conferences

Schools Involved:

Sidmouth Community College
Baylis Court School

Background: Sidmouth Community College is an 11-18 comprehensive school in rural East Devon. Baylis Court is an 11-16 comprehensive school in Slough. Initial contact between the staff at the two schools involved a number of different disciplines. At Sidmouth, Roger White, Head of Geography, Celia Fox, Head of Religious Education, and Martin Long, English teacher, held three video conferencing sessions with Kevin Price, Head of Humanities, Cheryl Garlinge, Head of Geography, and Fiona Roberts, religious education teacher, of Baylis Court in Slough. We soon discovered that our two schools contrasted very well. Sidmouth is a mixed, semi-rural school with a predominantly white and middle class intake. Baylis Court School is a girls' school on the edge of London with a very high proportion of Asian, Muslim pupils. During our initial meetings we agreed a number of areas of co-operation. These included looking at local