

Science in Action for Infant Learning (SAIL)

 **sfi**
Fondúireacht Eolaíochta Éireann
Dá bhfuil romhainn
Science Foundation Ireland
For what's next


DCU



Dear school community member,

We are writing to you to inform you about a very exciting project which is taking place in a class (es) in your school. The Project is called *Science in Action for Infant Learning (SAIL)* and as you can probably guess, it has to do with Science. The project is also about embodied cognition which involves pupils using their bodies to help them learn about Science concepts and skills.

In the summer of 2021, Dr Cliona Murphy and Dr John White (Dublin City University) selected your school specifically for this project and spoke to your school principal about this exciting opportunity. Only four schools nationwide were selected (we have listed them below), so one of the first things we wish to do is congratulate your school on being chosen for the project and also to thank them for accepting the invitation to participate.

The project is exciting because it involves thinking about how we learn. It offers a somewhat new and fresh way to learn. In particular, we want to make learning about Science an active, enjoyable and engaging experience. To do this, we are examining how movement can help us learn. We are also looking at other ways which help pupils learn such as smelling, tasting, touching, observing, dramatising and thinking about how they feel. As you can probably guess, a big emphasis in the work is on pupils being active and giving them as varied a learning experience as possible.





We have worked with teacher (s) from your school during the last academic term and have been working with them during this term. Some of the comments from them are very encouraging. We would like to thank and acknowledge all their work.

In the coming weeks and months, the team from DCU will also be working with parents and pupils to develop the ways in which embodied cognition can help learning. So, if you're a parent, there's lots to look forward to! You may soon be thinking (and acting!) more differently when it comes to learning and education! Indeed, the next time you are helping your child with his/ her homework, see if you can build any actions / acting into the work. You might also like to visit our [website](#), which is under continuous development as the project progresses.

Every good wish – and stay active!

John and Cliona

Project Schools:

Scoil Cholmcille, Mount Hanover, Duleek, Co. Meath.

St Patrick's and St Brigid's, Primary School, Bóthar Brugha, Drogheda, Co. Louth.











St Francis Junior NS, Priorswood, Coolock, Dublin 17.

St Patrick's NS, Stackallen, Navan, Co. Meath.

CHILDREN PLAIN LANGUAGE STATEMENTS


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Science in Action for Infant Learning - Child Plain Language Statement

	<p>It sometimes helps children to learn about the world by making things with their hands, by pretending and by doing things with their body. I want to know the fun things you do to learn about the world.</p>
	<p>Can you think of some things you do in class which help you learn about the world around you?</p>
	<p>Can you think of some of the fun things you do when you are learning about the world around you? I have given your teacher and your parents (/ guardian) some ideas about how to learn in a fun way.</p>
 <p style="text-align: center;">April</p>	<p>I am going to ask you some questions about the fun things you do when learning about Science and the world around you. You will be in a group with four other children. This is called a focus group. You will be able to listen to what the other children in the group have to say and they will be able to listen to what you have to say</p>
	<p>I will also talk to your parents and your teacher to see what they think about using actions to help people learn about Science.</p>
	<p>If you do not feel comfortable taking part in this project we will stop immediately. You won't have to take part in this project after that.</p>
	<p>I will write about what people think about using actions and your body to help them learn about Science. But I will never use your name.</p>
	<p>I will keep all of the information in a locked drawer, which no one else can open.</p>
	<p>I will keep the information for five years in case I write other essays about the projects. After this I will safely delete the information.</p>
	<p>If you have any questions about this, you can ask your parent or guardian to contact me. They know how to contact me as I gave them my email and phone number.</p>

**DUBLIN CITY UNIVERSITY
Science in Action for Infant Learning**

Child Assent Form

 <p>I have had this project explained to me.</p>	<p>I understand that I will be asked to be part of a group with four other children to talk about using actions and my body to help me learn about Science.</p>
<p>I understand that you will give the questions we are going to be talking about to my parents..</p> 	<p>I understand that you will talk to me in my school. I can bring somebody with me if I want</p>
<p>I understand what we are going to do.</p> 	 <p>I am happy to have the group tape recorded</p>
<p>I can take a break when I need to</p> 	 <p>I would be happy to talk to another person if I have any big concerns.</p>
<p>I can stop being in the group at any stage if I want to</p> 	 <p>I agree to take part in this project Name _____ Witness _____ Date _____</p>

Focus Group Questions: Pupils



Institiúid Oideachais Institute of Education

Focus group with your child - Parent / Guardian Informed Consent Form

Principal Researcher: Dr John White john.white@dcu.ie 01 700 9248
Co-Researcher: Prof Cliona Murphy cliona.murphy@dcu.ie 01 700 9157

Research Study Title:

This research project, entitled “**Science in Action for Infant Learning**” is being undertaken by Dr John White and Dr Cliona Murphy of the Institute of Education, DCU.

Clarification of the purpose of the research:

The overall aim of this project is to investigate pupils’, teachers and parents’ perceptions and experiences of the educational value of applying embodied cognition approaches to learning Science. Embodied Cognition (EC) is best defined as actions which assist the brain’s cognitive processing as our thoughts are shaped by the types of perceptual and motor experiences we have as we interact each day with the world. The project will involve you and your child in the use and construction of embodied cognition activities related to the Irish Primary Science Curriculum. Your child will also engage in embodied cognition activities (based on his / her Science curriculum) with his / her class teacher. We wish to organise a focus group with your child. The purpose of this focus group is to explore your child’s experiences and perspectives of using embodied cognition to learn Science.

Confirmation of particular requirements as highlighted in the Plain Language Statement:

Participation involves taking part in a focus group with a member of the research team that will last for approximately 30 minutes. The focus group will be made up of 4 other peers from your child’s class. The focus group will be audio recorded. Once the recording is transcribed, the audio recording will be deleted and no names will not be used on the transcript.

Confirmation that involvement in the Research Study is voluntary

If I choose for my child not to take part in this research study, I am aware there will be no consequences. I do not need to provide any reason for choosing for my child not to take part. My child can withdraw at any stage if he / she feels in any way uncomfortable about his / her participation and any data that he /she has provided will not be used in this research study. My child does not need to provide any reason for withdrawing from the study and I am aware there will be no consequences for withdrawing.

Confirmation of arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations

I understand that the data collected will be kept confidential where the data will be anonymised by the research team to ensure that my child’s identity is kept confidential. I understand that there are also exceptional circumstances where confidentiality cannot be maintained due to legal limitations.

Confirmation of arrangements regarding retention/disposal of data

I understand that my child’s data will be stored in a password protected folder on the researchers’ DCU Google Drive account. I am aware that the data will be retained for a period of five years and that it will be then permanently deleted by the researchers.

Confirmations relating to any other relevant information as indicated in the PLS

I consent to the use of my child's data for future studies within the following parameters: to be disseminated at national and international conference presentations and may appear in research publications.

PLEASE COMPLETE BELOW IF YOU CONSENT FOR YOUR CHILD TO PARTICIPATE IN THE FOCUS GROUP (Note: Your child will receive a hard copy of this form from your class teacher).

Participant – please complete the following (Circle Yes or No for each question)

<i>I have read the Plain Language Statement pertaining to my child's participation in this project (or had it read to me)</i>	Yes/No
<i>I understand the information provided</i>	Yes/No
<i>I understand the information provided in relation to data protection</i>	Yes/No
<i>I have had an opportunity to ask questions and discuss this study</i>	Yes/No
<i>I have received satisfactory answers to all my questions</i>	Yes/No
<i>I am aware that the focus group will be audiotaped</i>	Yes/No

Signature:

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this research project

Parent / Guardian Signature: _____

Name in Block Capitals: _____

Witness _____

Date: _____

PARENTS PLAIN LANGUAGE STATEMENT

DUBLIN CITY UNIVERSITY

Plain Language Statement for Focus Group with Pupils

Research Team: Dr John White john.white@dcu.ie 01 700 9248
Dr Cliona Murphy cliona.murphy@dcu.ie 01 7009157

School: Policy and Practice, DCU Institute of Education

Overview of this Research Study

The overall aim of this project is to investigate pupils', teachers and parents' perceptions and experiences of the educational value of applying embodied cognition approaches to learning Science. Embodied Cognition (EC) is best defined as actions which assist the brain's cognitive processing as our thoughts are shaped by the types of perceptual and motor experiences we have as we interact each day with the world. The project will involve parents, teachers and pupils in the use and construction of embodied cognition activities related to the Irish Primary Science Curriculum. The purpose of the semi-structured interview is to explore and discuss your perceptions and experiences of using embodied cognition activities for the Science curriculum with your child / children.

The project's principal investigator is Dr John White who works in the School of Policy and Practice, DCU Institute of Education (john.white@dcu.ie). The secondary investigator is Dr Cliona Murphy who works in the School of STEM, DCU Institute of Education (cliona.murphy@dcu.ie).

Details of what involvement in the Research Study will require:

You are invited to take part in a semi-structured interview. If you wish to partake in the interview, this should last approximately thirty minutes. This will be a one-to-one interview with a member of the research team. The purpose of the interview is to focus on your perceptions and experiences of using and constructing embodied cognition activities for the Science curriculum with your child / children.

Potential risks to participants from involvement in the Research Study (if greater than that encountered in everyday life)

The stated level of risk and its corresponding level of review is minimal as the project activities are ones which are typically encountered in everyday school / home life, and the semi-structured interview is guided by the norms of typical human conversation. All participants will be provided with a letter of invitation and written consent will be sought at the outset of the study.

The interviews will take place at a time, date and place that is convenient for you. If, at any stage, during the study, you no longer want to participate, the interview will be stopped immediately and the data gathering process will be terminated. You do not need to provide any reason for withdrawing and there will be no consequences for withdrawing. A copy of the interview schedule in advance of the interview will also be made available to you.

Benefits (direct or indirect) to participants from involvement in the Research Study

The research may be of value to participants as it will foster reflection on the Science curriculum and how both parents, pupils and teachers can use embodied cognition to assist learning Science concepts and skills.

Advice as to arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations

The highest standards of practice will be employed in order to safeguard confidentiality, and only the researchers will have access to the real names of the participants. Audio-recordings of interviews and focus groups will be destroyed once they have been transcribed. Any paperwork relating to interviews / focus groups will be stored in a secure location on the University campus. Any data stored electronically will be stored in a password folder on the researchers' DCU Google Drive. Any computers / laptops used will also be encrypted. Any reference to interviews / focus groups at research meetings, talks or publications will use codes and false names so that individual participants cannot be identified. Please note that in exceptional circumstances where confidentiality cannot be maintained due to legal

limitations, including disclosure which involves risk of harm or danger to the participant or another individual or a child or when disclosure is required as part of a legal process or Garda investigation and the data is subject to subpoena.

Advice as to whether or not data is to be destroyed after a minimum period

All data collected will be stored for 5 years by the research team. The data will then be destroyed and permanently deleted by the research team.

Statement that involvement in the Research Study is voluntary

If you choose not to take part in this research study, there will be no consequences for you. You do not need to provide any reason for choosing not to take part. You can withdraw at any stage if you feel in any way uncomfortable about your participation and any data that you have provided will not be used in this research study. You do not need to provide any reason for withdrawing from the study and there will be no consequences for withdrawing.

Research Ethical Approval

Ethical approval for this research study has been obtained from the Dublin City University Research Ethics Committee.

If participants have concerns about this study and wish to contact an independent person, please contact:

The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000.

Note: In foregrounding questions, the pupils will be presented with the pictures, relevant work cards and photographs of the actual Science lessons in question to refresh their memories.

1. What did you like about XXX lesson?
 1. What parts were fun?
 2. What did you like about using actions to help you learn about XXXX?
 1. Note - this question will also be presented as being rooted in the lesson content: For example:
 2. "What did you like about waving your arms like a butterfly?"
 3. "What did you like about pretending to be a caterpillar in a cocoon?"
 1. How did you feel?
 2. Do you think pretending to be a caterpillar in a cocoon helped you to learn what it's like to be a caterpillar?
 3. Why do you think pretending to be a caterpillar in a cocoon helped you to learn what it's like to be a caterpillar?
 3. What did you like about using your body to help you learn about XXXX?
2. Did you think lesson XXXX was easy? Why?
3. Did you think lesson XXXX was difficult? Why?
4. Do you think doing actions and movements help you learn? Why? In what ways?
5. Do you think some actions and movements suit some parts of your body more than others? Which ones? Why?
6. Did you do the actions at home with your parents?
 1. Did you like doing actions with your parents at home?
 2. Do you think they liked doing actions with you? Why?