

# Ethical Practice When Doing Research with Humans: Guidelines for Students and their Supervising Teachers

These ethical practice guidelines are for students and teachers engaged in school research and other projects that involve people (other students, family, members of the community). The guidelines have four sections.

- Section one explains the scope and purpose, some special terms, ethical practice criteria, and the responsibilities of both students and teachers.
- Section two includes examples of research scenarios.
- Section three has templates for informing and getting permission from people who are going to be involved in the research/project.
- Section four includes the titles of two Ministry of Education publications about research involving people and also animals. These guidelines recommend that
  - teachers explain these guidelines to students and monitor students as they design and engage in research and other projects.
  - students follow these guidelines and liaise regularly with their teachers.

## SECTION ONE

### Scope

These guidelines are for school-initiated student research and other student projects that involve one or more persons as participants.

### Purpose

The purpose of these guidelines is to:

- provide information to students, teachers and people in communities who are involved in and connected with school-initiated research and other projects that school students undertake
- make students aware of the importance of conducting research and other projects in an ethical manner.

### Definitions

**Research** means an activity or set of related activities approved in advance by a teacher during which a student or group of students generate data by involving one or more persons in order to address a research question.

**Data** are the information collected from or about participants by a student carrying out a research activity or set of related activities; data may take various forms, such as human tissue, e.g. saliva, and audio recordings and photographs.

**Project** refers to a task or set of related tasks approved in advance by a teacher that a student carries out and that involves one or more persons (the term 'research project' may be used).

**Participant** means a person, including another student or family member, whom a student involves in research or another project.

**Student** means person enrolled in a school.

**Teacher** means the person ultimately responsible for the research/project component of a student's learning; a teacher may delegate responsibility for aspects of the work to a parent or some other suitably qualified person.

**School-initiated research/project** is research or a project that a teacher approves as a component of a student's learning and monitors until completion and that takes place at school or outside of school.

### Ethical practice

### **Asking permission**

People who become involved in research or other projects must be volunteers. People are volunteers when they feel free to choose whether to take part, know all the details about what their involvement will mean and give their consent. Asking for consent must take place before the research/project begins. This consent requirement applies to members of a student's family and other students in the class as well as people more widely.

### **Safety**

People who become involved in research or other projects must be safe at all times. Involvement must not cause harm. There are several different kinds of harm. Examples are physical and emotional harm; taking a risk that may result in harm; not listening carefully so that misunderstanding or confusion may arise; and deceiving or misleading.

### **Privacy**

People have aspects of their lives that they do not wish to share openly with others or even share at all. Some people may share more willingly than others. Students engaging in research and other projects must respect people's privacy and how much they are willing to tell. They must keep information confidential by storing it securely, not talking about it with others, and by presenting it in ways that hide the identities of the people who gave it to them. Data may be used only for the purposes that the participants consented to and is to be destroyed once the research/project is finished with.

### **Honesty**

Honesty is important at all times. Students must be honest when they explain to participants how they will collect and use data. They must also be truthful and accurate when they write up the research or project.

### **Reporting back**

Participants have an interest in the research and other projects in which they become involved that extends to the outcomes of their involvement. It is important for students to report back to participants about what has been achieved in the research or other project. Sometimes it may be appropriate to give participants a copy of the completed assignment. At other times, reporting may be limited to acknowledgement, thanks, and a few words about the main findings.

### **Responsibilities for students**

#### **Getting ready**

- have a fully developed plan that your teacher has approved before you begin the research/project, and a negotiated time-frame for reporting to your teacher at regular intervals
- prepare written information about your research/project using the template in these guidelines, and include:
  - what the aim of the research is
  - what you expect participants to do
  - how much of their time you need
  - how participants can contact you and your teacher
  - how you will keep their identity and information confidential
  - how they can pull out of the project
  - how you will write up the project
  - how you will report back to participants

- prepare a consent form using the template if consent is to be in writing

### **Approaching people to become involved**

- work out an approach that suits the age, status and cultural background of the people you want to involve
- approach potential participants politely and respectfully
- explain clearly to potential participants everything you want to involve them in
- give them a copy of the written information you have prepared
- answer their questions

### **Getting permission**

- ask participants' permission to involve them based on the information you have provided
- get both permission from parents or care-givers and agreement from children if you propose to involve children; for participants under sixteen but who are no longer children, consult with your teacher about whether to involve parents/caregivers
- record participants' consent in writing by asking them to read and sign your consent form, or if there is no consent form record their permission for yourself
- keep in a safe place the signed forms and any notes you have made

### **Doing the research/project**

- keep to your overall plan throughout the research/project if possible
- check with your teacher about any proposed changes if these become necessary, and whether you should clear them with your participants
- record and label all research data and carefully store them in a safe place
- keep your teacher informed of progress on a regular basis
- advise your teacher immediately of any problems
- keep confidential everything you have agreed to keep confidential and everything you think is private to the participant
- ask your teacher and check with people you have interviewed if you want to use a quotation
- ask your teacher and check back with people if you want to use photographs of them; be sure to show them the photographs when getting permission for using these
- use pseudonyms instead of participants' names and omit any information that would identify them when writing up your research/project; ask your teacher if you think you should alter information to protect identity

### **Reporting back**

- thank participants immediately after their involvement and later formally in writing if appropriate
- let participants know how your research/project went
- tell participants how they can access the research/project presentation if it is to be on the WEB or publicly displayed elsewhere

### **Writing up the research/project**

- write up the research/project as well as you possibly can, with attention to the ethical practice criteria explained in these guidelines

### **Responsibilities for teachers**

Teachers should:

- guide students to design research/projects that reflect the research processes of their discipline and are worthwhile and trustworthy
- guide students to design and complete research/projects that link with the standards and formal assessment requirements mandated by the Ministry of Education

- guide students to design research/projects that are ethical in that they comply with the ethical practice criteria and student responsibilities explained in these guidelines
- check all research/projects against the safety in science rules (see Ministry of Education (2000). *Safety and science: A guidance manual for New Zealand schools*. Wellington, New Zealand: Learning Media)
- check all research/projects against the Privacy Act 1993 (see [www.privacy.org.nz](http://www.privacy.org.nz))
- ensure that there is an appropriate safety protocol in place before students are permitted to commence their research/project
- set up a framework for regular meetings with students to support their research/project work and monitor their compliance with the criteria and responsibilities stated in these guidelines
- provide training and practice in research methods such as interviewing and writing questionnaires before students are permitted to commence
- sign off approved research/projects before students are permitted to commence
- be available for contact by participants and students throughout the research/project
- guide students to work with and store data systematically, and write up their research/projects honestly and in a way that demonstrates what the research question was, how it was addressed and what was discovered

## SECTION TWO

These five scenarios help to illustrate how ethical practice criteria may be applied in real situations. All the criteria in the guidelines apply to all five scenarios, but each scenario also has particular issues which are explored here. Scenarios range from regular science classroom activities to projects that may be developed for science fairs. Scenario five relates to the social sciences.

### **Scenario One**

This experiment is about choosing healthy food. The question is whether colour influences a pre-school child's choice. Che is a year nine student. He is interested in finding out whether his four-year-old brother Jack is more likely to choose healthy food if it is a particular colour. He plans to add food colouring to some apple slices. Because this experiment involves only Che's sibling and their parents there is no need for written information and a written consent form. Che needs to record in his log book that he has discussed the experiment with both Jack and their parents and that everyone agrees he can go ahead. He also needs to record the results in his log book, the time of the experiment and other details according to his teacher's instructions. All entries in the log book need to be dated.

#### **Specific ethical issues**

**Safety:** Check whether Jack is allergic to food colouring. Also check the safe levels for food colouring.

**Permission:** Tell your parents the purpose of the experiment, what it is for and what it involves and get their permission. Then explain to Jack that the experiment is for school and what you want him to do. Ask him if he is happy to do this.

**Reporting back:** Tell Jack and your parents the result of the experiment and thank them all.

### **Scenario Two**

This experiment is about a change in chemical properties. The question is whether if you change the surface area of crackers starch is broken down to sugar by saliva faster. Students decide to get some crackers and break them up into different sizes and put one gram of each size into test tubes. They then dribble half a centimetre of saliva into each tube and stir. After five minutes they add ten drops of Benedict's solution to two tubes per different size of cracker, apply heat for five minutes and record in their log books if the solution changes from blue to green yellow or brick red.

### **Specific ethical issue**

**Safety:** If a student is asked to participate in this experiment he or she must be informed of the safety issues and properly briefed on the method to be used.

There is minimal risk with using saliva but a student must work with only his or her own saliva. Saliva must not be exchanged. Therefore, in this experiment, a different student must be assigned to each test tube and be responsible for adding his or her own saliva. Each student works with the assigned test tube through to completion and thoroughly cleans the test tube. Hygiene is very important in collecting, use and disposal of the saliva.

### **Scenario Three**

This experiment is about effectiveness of short-term memory. The question is whether there are differences in recall based on short-term memory across different age groups. Sky and Nick are year nine students. They are interested in finding out how many items 7-9 year olds, 13-16 year olds, 35-50 year olds and 60+ year olds (ten in each group) can recall after the same time period has elapsed. They put twenty items on a tray and give each person one minute to memorise them. They then give them one minute to recall as many items as possible. They record and date results in their log books.

The 7-9 year olds are from a primary school class in another school, the teenagers are from their own school, and the adults are from their families and friends. Sky and Nick prepare and use written information and written consent forms for all three groups. They keep these in a file.

### **Specific ethical issues**

**Permission:** Work out an approach that suits the age, status and cultural background of the people you want to involve

#### 7-9 year olds

- prepare written information and written consent forms and ask your teacher to help you make arrangements with a teacher in a primary school to work with a group of 7-9 year olds. The principal of the school will need to be approached and parents/care-givers consulted. Information for the principal and the teacher will be different in style and presentation from information for 7-9 year olds. It is likely that the school has a process in place so find out what this is and follow it. File completed consent forms.

#### 13-16 year olds

- ask your teacher how to go about selecting and working with ten students in this age group. Again, prepare written information and consent forms and keep to your school's established protocol. Prepare written information in a style that you think those in this group will find easy to read and understand. Explain to participants that the experiment is for school and what you want them to do. Go through the written information with them. Arrange a time and place for the experiment that suits them. File completed consent forms.

#### 35-50 year olds and 60+ (friends and family)

- you may be less formal here and rely on oral explanations and agreement, but be sure to respect people's right to choose and to fit in with them. Record names and dates in your log books and that consent that has been given orally.

**Privacy:** Participants may not want others to know how they have done so keep individuals' results confidential.

**Reporting back:** Write a letter to the 7-9 year olds' teacher in which you thank him or her, give information about the outcome, and ask to have your thanks passed on to the children. Tell the other participants the results of the experiment personally and thank them.

### **Scenario Four**

This experiment is about effectiveness of energy drinks. The question is which of five energy drinks appears to give the most energy. Dan and Jen are year seven students. They give each of five participants a different energy drink. They then test the students' energy levels by taking their heart rates with a sports heart rate monitor. (Originally they planned to take their blood sugar levels with a pinprick blood sample taken with a home glucose testing kit, but when they checked in the Safety and Science booklet they found that using blood is banned.) They do the test at the same time each morning for five mornings after each participant has had a breakfast of toasted muesli. The participants are family members and friends. They record in their log books that they have discussed the experiment with their participants and note names and dates and that consent that has been given orally. They also record the results in their log books, the times of the experiment and other details according to their teacher's instructions.

### **Specific ethical issues**

**Permission:** Tell the people you want to involve all the details and ask whether they are willing to take part. Show respect and fit in with them. Also give them a written description of what is involved.

**Safety:** Follow the instructions when using the heart rate monitor. Discuss the result immediately with the participant. You do not have the knowledge to make judgements about heart rates but the participant may be able to detect if something is not normal.

**Reporting back:** Tell the participants the results of the experiment personally and thank them.

### **Scenario five**

This research is about "saving the trees". Year 12 students decide to survey residents in their street by placing questionnaires in letter boxes. The research question is what happens to advertising material placed in letter boxes. The questionnaire comprises five simple questions requiring tick-box responses. People willing to respond are asked to complete the questionnaire and place it in the student's letterbox. At first the students thought they would email all the people they have email addresses for but they were unsure whether this would contravene the Unsolicited Electronic Messages Act 2007.

### **Specific ethical issues**

**Permission:** People will show their willingness to be involved by returning a completed questionnaire. Returns may be low but the whole class will distribute questionnaires, which may compensate. You should allow people to make up their own minds and not approach them personally.

**Safety:** There is always a risk in approaching people unknown to you so this is another reason for not following up through face-to-face contact.

**Privacy:** Focus the questions on what is relevant to the research question not on personal matters such as income level or age or purchases made.

**Honesty:** Tell the truth when reporting results, even if these are not very exciting. Be specific about the number of responses when you make claims about what you have found out. Do not generalise to all people on the basis of your sample.

**Reporting back:** Place a thank-you note in all letter boxes where you left questionnaires.

## **SECTION THREE**

### Templates

[Title of project]

#### **Information for Participants**

(Give a copy to the participant and file a copy for yourself)

##### **Who am I?**

- name
- year
- school
- subject
- supervising teacher's name

##### **Why am I doing this research/project?**

- aim of research/project
- purpose of the research project (i.e. to gain NCEA credits)
- research question/task that you want to address

##### **What does the research/project involve?**

- detail the steps you plan to complete the research/project

##### **What will participants be doing?**

- what you will involve the participant in
- where this will take place
- how long it will take
- details about any checking back and the time involved for the participant
- assurances about safety, privacy and confidentiality

##### **Who will participants contact about any problems?**

- how a participant can withdraw from the research/project
- contact details for you and your teacher/supervisor

##### **How will I report back to participants?**

- include information about presentations for the public

##### **Thank you**

[Title of project]

#### **Consent Form for Participants**

(Prepare two copies for each participant to sign. Give the participant one signed copy and file the other one)

I [space for participant's name] have received information about [write the title of your research/project].

I have had any questions answered satisfactorily.

I understand what my involvement will be and I give my consent.

I understand that I may withdraw my involvement at any time.

Signature of participant:

Name of participant:

Date:

## **SECTION FOUR**

### Resources

Ministry of Education (2000). *Safety and science: A guidance manual for New Zealand schools*. Wellington, New Zealand: Learning Media.

Ministry of Education (1999). *Caring for animals: A guide for teachers, early childhood educators and students*. Wellington, New Zealand: Learning Media.

New Zealand Association for Research in Education Ethical Guidelines. Retrieved 24 November, 2008, from [http://www.nzare.org.nz/pdfs/NZARE\\_ethical\\_guidelines](http://www.nzare.org.nz/pdfs/NZARE_ethical_guidelines)

University of Waikato 2008 Calendar. Ethical Conduct in Human research and Related Activities Regulations. Retrieved 23 October, 2008, from <http://calendar.waikato.ac.nz/assessment/ethicalConduct.html>

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Tolich, M. (2008). Guidelines for community-based ethics review of children's science fair projects. *Journal of Bioethical Inquiry*, 5:4, 303-310.

The author of these guidelines is Rosemary De Luca, PhD MNZM (for services to ethics), Chair, University of Waikato Human Research Ethics Committee and Chair, University of Waikato School of Education Research Ethics Committee, in consultation with Bev Cooper, MSc(Hons), Acting Director Centre for Teacher Education, School of Education, University of Waikato. Past President NZASE