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The *NIWA* Auckland City
Science and Technology Fair
scifair.org.nz

Ethics Information
Animals and Humans
for
Teachers and Students

Ethics - Who Needs It?

The information in the booklet on animal ethics is based on that provided by the NZ School's Animal Ethics Committee. Full details and all necessary forms can be found on their website.

https://animalethics.org.nz/

Who needs Ethics Approval?

Student, class or teacher investigations and projects which involve humans or other animals must comply with ethical standards. Considering the ethics of a piece of work, and applying for approval if necessary, is a valuable learning experience for students.

Animal Ethics:
Under the Animal Welfare Act 'animal 'means any live member of the animal kingdom that is a mammal, bird, reptile, amphibian, fish (bony or cartilaginous), octopus, squid, crab (including half crab), lobster or crayfish (including freshwater crayfish), and includes any marsupial pouch young or mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development.
Under the Animal Welfare Act 'manipulation 'means interfering with an animal's normal physiology, behaviour, or anatomy. It includes subjecting it to unusual or abnormal practices (e.g. exposure to parasites, microorganisms, drugs, chemicals, biological products, radiation, electrical stimulation or environmental conditions) or depriving it of its usual care.

If you are unsure whether your activity will require ethics approval, first check the flowchart on the next page and then if you are still unsure apply for approval and the ethics committee will instruct you if it is needed or not.

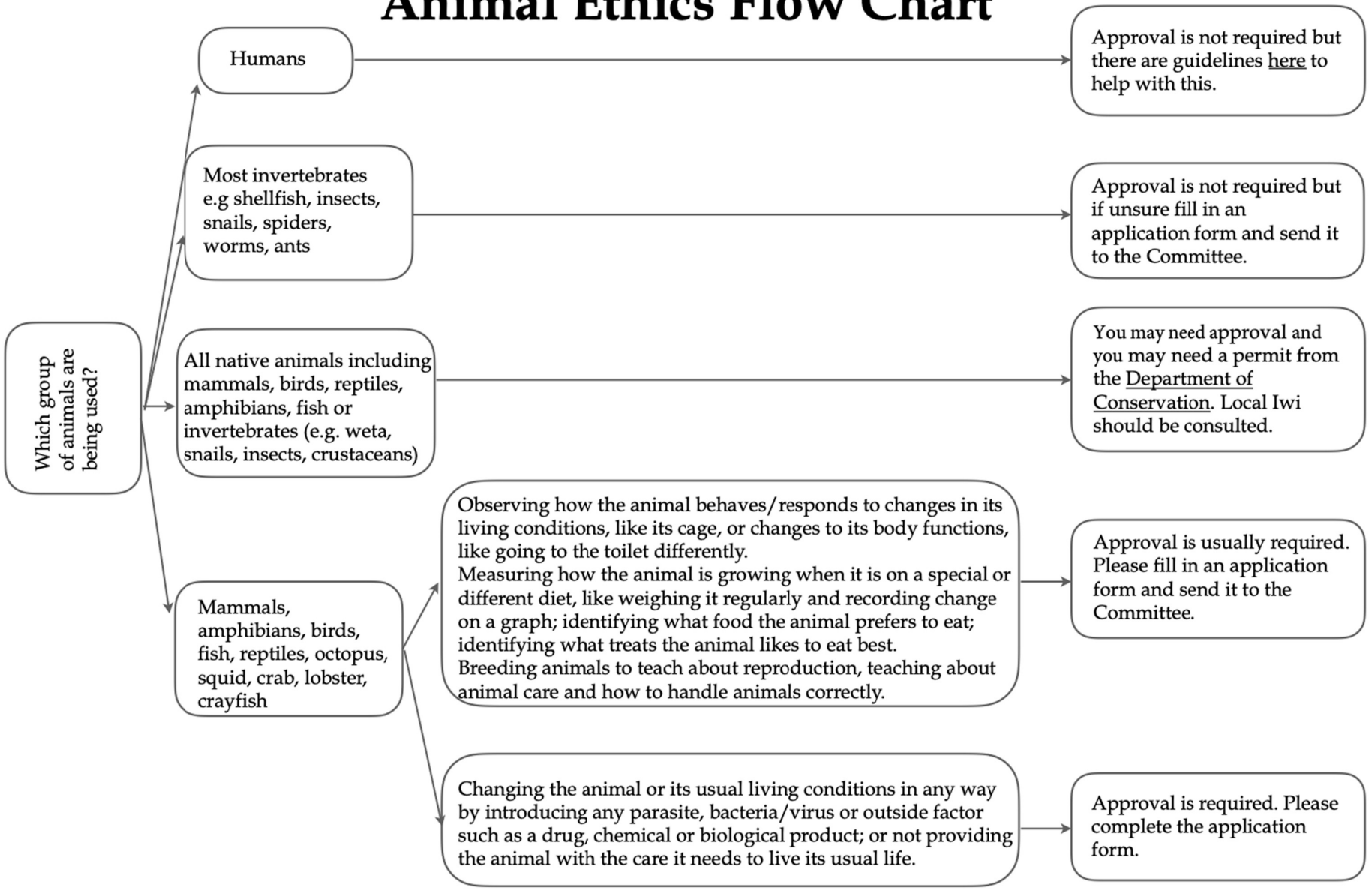
Note: for the Auckland Science and Technology Fair we ask all participants who are using animals but do not require ethics approval as indicated above to fill out a **Care and Safety Check** to ensure all animals are treated in an appropriate manner.

Please Note:

The NZ Animal Ethics Committee meets once a month to consider applications.
Please ensure that your application i**s submitted at least two weeks** before the Committee meets.
Approval is required before any work commences.

Meeting dates for 2025: See their website.

Animal Ethics Flow Chart



Human Ethics Approval

Science Fair projects must meet commonly accepted ethical standards.

- Students must consider these before a project involving human or animal participants can be approved.
- Considering ethics is a very good learning experience for students.

Human Ethics

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).

Will your investigation involve yourself or other people in:

- tasting, touching or smelling different foods or other substances?
- taking any medicines, drugs or other substances?
- applying any substance to their bodies?
- undergoing any physical or medical tests?
- giving you any information of a personal, private of confidential nature?
- giving information that could identify them?

If it does then you must think about the safety of yourself and the participants involved.

How important is research design?

People should only be asked to contribute to research that will give meaningful results. Design the research carefully and think about how you are going to use or analyse the results before you ask people to contribute to your work by being research participants.

If your project involves asking questions, you could try them first on your friends or relatives to determine whether they appear reasonable and acceptable, particularly from a stranger if that is how it will be posed.

What information do I need to give my research participants?

When you ask people to participate in your research, you need to tell them, in a language they can easily understand:

- the purpose of your research
- what will be required of them
- what risks or benefits there will be to them if they agree to work with you
- that they can withdraw from your research at any time
- if you are collecting information about people they should know beforehand whether or not the information can be linked to a particular person, what you will do with that information, who else will see it, and how you will dispose of your records when the project is over.

It is best to give this information to people in a written form and to give them a chance to think about it and to ask any questions, before they make any decisions.

What level of risk to research participants is reasonable?

Any research that involves bodily fluids or the ingesting of material (eg such as taking any kind of medication, ingesting substances, testing body tissue, saliva, skin scrapes, use of pain or deprivation of basic food or drink) **should only be done under the guidance of a medical person.** It is very unlikely that you will be doing such projects while still at school.

Any project should only involve minimal risk ie any adverse effect should be very small, and the probability of that effect occurring should be low. For instance, if one is asking people for information, it should only be the sort of information it would be safe, easily volunteered and appropriate to ask in an ordinary conversation, or if you are asking people to exert themselves, physically it should only be to a level that that person might do in everyday life.

Who needs to give permission (or consent) for someone to participate in research?

A parent or guardian needs to give their permission for anybody under 16, as well as the young person agreeing. The parent or guardian needs to have all the information that you would give a research participant. You should keep records of who has given consent and how it has been given whenever the research involves more than observation of individuals in their normal activities.

You might like to consider these general ethical principles when planning your project

1. Respect for your Participants

- People do not have to help you with your research and they do not have to give you a reason. If you are conducting a class survey it can't be compulsory to participate.
- You need to understand the cultural and religious beliefs of your participants and make sure your research is not disrespectful or offensive
- All the data belongs to the respondents so it is nice to give them a summary of your final research finding at the end so they share in what you found out.

2 Minimise the Harm to the Participants

- Harm can be things like pain, stress, fatigue, emotional distress, and embarrassment. Think about what you want to do in terms of the harm it could cause. The best way to do this is to test your ideas with your teacher or mentor). That way you will get a range of opinions for you to consider. Once you have a plan you should ask people from your participant group how they would feel about the activities or questions you propose.
- You may need to alter your design to minimise the harm. For example if you are doing a fitness test and collecting weight data would you do this in public or test each person on their own?

3 Informed and Voluntary Consent

- Participants should give signed informed consent. You should keep these safely until the end of your project
- You must give them enough information about your project and testing you want to do for them to make a good decision.
- They must not feel pressured to participate in the project.
- It is best if the information given to them in advance of the research, in written form, so they have time to think about it.
- Participants can withdraw at any time without giving you a reason and you should return any data already collected unless they say you can keep it.

4 Respect for Privacy and Confidentiality

- If the person could be identified they must give their consent. If you want to use the data in a way they could be identified, use photos of them or video material you should get their written permission
- You must keep private and confidential any information you are given.
  - -Where are you going to store your information (locked cabinet).
  - -What is the data going to be used for (your project only).
  - -How will it be destroyed after the project (shredder or burnt).
  - -Who else will see the raw data (you, your teacher or maybe your mentor).
- It is good practice to tell your participants this information when they are giving their consent, by putting it on your information form.

5 Avoidance of Unnecessary Deception

Sometimes it is necessary to hide the true reason for the research in order to collect valid data. This is a very rare occasion but if it is necessary and the deception will not cause harm then it can be done. You should make sure that the participants are told as soon as possible what the real reason for the research was. Ideally this should be before they leave the testing room.

6 Social and Cultural Sensitivity

It is very easy to only see things from our own cultural and religious perspective. Do some research and consult with people from the group you wish to research. Be sensitive to what you are being told is important to them when you are planning your project and then check you plan with your experts.

Social and cultural awareness in research assumes an appreciation of those attitudes, values, beliefs, protocols and actions which constitute the intellectual property, and cultural traditions of ethnic groups.

Social and cultural awareness include actions which recognise and respect the cultural identities of others and safely meet their needs.

This could involve:

- Clear, open and respectful communication to develop trust.
- Collaboration between researchers and participants engaging with others in a two-way dialogue where knowledge is shared.
- Modification of plans, where and when necessary, following discussions with participating groups; Approval and/or support by ethnic group(s) involved in the study must be sought before fieldwork begins.
- Where a Maori population is the focus, respect must be given to the principles of participation, partnership, and protection that are implicit in the Treaty of Waitangi.
- Research methodology reflects trust between persons, the rights, interests, cultural and intellectual property of the research participants being safeguarded.
- No exploitation of the research participants for personal gain or financial remuneration.
- The full contribution of participating population(s) should be recognised in the publication of results.

Will you need ethics approval? Yes / No

Some Other Points to Think About

- If your school has a Human Ethics committee then you are required to submit an application if their guidelines require it.
- You may like to ask your mentor if they think you require human ethics approval and if so can the project to go through their organisations Human Ethics Committee. If they do, ask them to help you with this process. This is an excellent learning opportunity.
- If you are dealing with a group that is unable to give informed consent, then you need to be especially careful. If working with children (under 16) then you need to get their parents informed consent as well as that of the participant. Make sure you give age-appropriate information to the participants.
- While it is exciting to discuss your project with friends and family you should remember to respect the privacy of the participants especially if they go to your school and could be identified by others.

For an example of an information sheet to use with a project involving humans see Page 11

Please Note:

- No human survey participant should be named - use code numbers only
- All human participants should be made aware of the Disclaimer found on Page 7
- Experiments should not be carried out on yourself; this is not good science.

DISCLAIMER: The Auckland City Science and Technology Fair Committee:

- does not accept any responsibility for human or animal misfortune as a consequence of involvement.
- does not necessarily support the reported conclusions when product testing preferences, or other findings are identified. No responsibility for product testing implications will be accepted.

A Students Guide To Ethics and Science & Technology Projects

Research in science and technology often involves animals or people: finding out about them, using them, or testing things on them. In New Zealand we share values that protect people and animals from unnecessary harm. Good science recognises that the things we do to learn and to improve technology have limits that protect people and animals. "Ethics" is about balancing the need for such protection with the need for learning and development.

Who Has to do an Ethics Check?
Actually, everyone must do an ethics check for every investigation. This applies to schools, universities, research laboratories, farms and factories and field workers – anyone investigating or testing anything in the broad area of science and technology. In most cases the check is a simple personal test to make sure what is being done is ethical. However, if the investigation involves animals or people, a more formal check is required. So it is not just students doing a project who have to do ethics checks.

What is "Ethics Approval "?
For some investigations your teacher can approve your project if he/she is satisfied it is ethical. In that case "Ethics Approval" is what you get when your teacher says you can do the project. In other cases your project has to be checked by an Ethics Committee. If they approve your project they will issue an "Ethics Certificate" permitting you to do the project. That certificate must be displayed on your project. This book tells you how to find out if you need ethics approval, and if so, which type of approval you need.

But I'm Just a School Pupil, I'm Not a Real Scientist!
Wrong. If you are doing a project you *are* a real scientist. Science and technology are not things only strange geeks in white coats do in hubbly-bubbly laboratories. It's what you do when you try to find out something about the universe in which we live, or some way of solving a problem – and that's what you do in a science or technology project. But in any case, there are four very good reasons why school students have to do ethics checks – they are explained next.

Why do we Have to do an Ethics Check?
- The law requires it. *The Animal Welfare Act 1999* makes it very clear that investigations and experiments with animals as part of school studies must be checked for ethics. Even keeping a pet or other animal at school must meet the requirements of this Act. *The Privacy Act 1993* also controls how you collect, use and report information about people. There are other laws too, such as those controlling the health and safety of people at work, people having medical treatment, and testing things on people.
- You should want to make sure you are caring for animals and other people properly. Sometimes you may not be aware that something could be wrong with what you plan – no one expects you to be an expert! Even experienced researchers can make mistakes, which is why they get other people to check their plans too. The only way to be sure is to do an ethics check.
- Science and Technology Fairs are sponsored by the Royal Society and by corporate sponsors who also have to keep the law – and they have a right not to have their names and standards blemished by students who lack ethical care.
- Learning to "do" science and technology includes learning to do things the right way. Ethics checks are a part of every science and technology investigation – so learn now and be better educated for the future.

What is Involved?
The first step is very simple: you just have to decide whether your project involves any sort of animals or any people (including yourself) in any way. If it does, then the next step is simple too: you have to check whether or not you will need a special Ethics Certificate – actually, you don't have to know *why* the certificate is needed, just *if*! And if you do need a certificate, that too is simple (but not as simple as the first two steps!): you have to explain what you want to do to an Ethics Committee who will tell you if you can do your project or not. That's it.

How Do I Check the Ethics?
The best way is to talk with your teacher to see if you need ethics approval. Use the ethics flow chart. If you are using animals it is very likely that you will need approval. If you are not sure you should apply anyway.

When Can I Start My Project?
If everything else is ready, you can start your project straight away if you find you don't need ethics approval. But if you need ethics approval, you must get that **before** you begin any investigation or testing. (You can get information from books and such places as the internet. And you can plan how you will do your investigation, But you must not begin any observations or tests, or gather information from people or from observing people or animals, until you have approval.)

What Happens if I Do a Project Without Ethics Approval?
If you **need** ethics approval and you **begin** or **do** a project **without** it,

- you will not be allowed to enter or display your project at the fair
- you may have broken the law and you and your school could be in trouble.

But What if I Just Made a Mistake?
Don't panic! If you have done your checks properly, or even if you have gone too far without ethics approval, stop and get help. We can all make mistakes, and your teacher and the Fair Committee want to help you learn and do well. If you have made a mistake we will all help you. Of course, there are consequences for mistakes, and if a project that needs ethics approval has gone too far it might not be possible to fix that – in that case you will not be able to enter or display your project. But whatever you do, don't press on with a project if you have made a mistake with ethics – you must stop and get help.

What Happens if My Project is Selected for the Fair?
If your project is selected for the Fair you and your teacher will have to complete parts of the entry form that certify you have done ethics checks properly and have any approval needed. If you have not done this you will not be able to enter your project even though it was chosen by your school. If your ethics checks and approval are correct, your project is now headed for the fair! Congratulations.

Why are *All* Animal Studies Included?
Well, it's simply that we have a duty to care for all forms of animal life. The *Animal Welfare Act* has some lists of animals for which ethics must be checked. Some animals are not included in those lists – but the Act also requires we care for all animals, and we know from projects sent to the Fair in the past that there can be ethical issues that students and teachers are not aware of. So to help everyone, to make sure all investigations are ethical, and to help train you in good science and technology, we require proper recording and authorisation procedure for all projects involving animals in any way.

Oh! and Check Safety Too
This is not just about ethics – there can also be safety issues that need to be checked. Make sure you talk to your teacher about safety for any experiments or investigations you plan to do. Also check about safety before your make up you project display – there are some things you cannot have on display even if they have been part of your investigation.

Don’t Need Animal Ethics or are Using Microorganisms?

For Care and Safety Review of Animals and Micro-organisms ask your teacher for the appropriate form or download them from the Science Fair website.

All projects involving animals not requiring an Animal Ethics Approval should complete a **Care and Safety Review Form**.

The Teacher in Charge of the Science and Technology Fair at your school should check this form.
Once completed and checked this form must be placed inside your logbook.

Schools must ensure they are following the **Safety and Science Guidelines** from the Ministry of Education

The full document can be downloaded from here **Safety and Science: Guidance document**

https://newzealandcurriculum.tahurangi.education.govt.nz/safety-and-science-p-taiao-guidance-for-schools-and-kura/5637238334.p

Safe procedures with Living Organisms P93-95
Micro-organisms P95-96

Please Note
This is a new guidance document from 2023. It is found online and as a result any errors will be changed as they are found, and any new information will be added as required. It is important that teachers remember to view the latest version when making decisions relating to safety in Science.

Fudge Taste Panel Participation

My investigation

For my Science and Technology Fair entry, I am investigating the changes taste and texture to fudge, as I change the beating time of the mixture.

Taste panel

I would like you to be a member of the taste panel and to answer some questions about the fudge, which I have made. You will be given some samples of fudge to taste and to record any differences you perceive in texture, taste or other aspects of the fudge. You may choose to swallow or to spit out the fudge once you have tasted it.

You will record your views on a sheet provided.

The benefit of participating in this study is that you will get to eat lovely fudge. The risks include that you may not like the flavour or that you may have an allergic reaction to the fudge or to one of the ingredients in it. Do look carefully at the ingredients list and **if you are allergic** to any one or more of the ingredients then please **do not participate** as a member of my taste panel.

If you are over 16 years of age then I need you to sign the participation form below that you will agree to participate. If you are below 16 then 1 need your permission and that of your parent or caregiver -you must each sign the sheet.

Fudge recipe

The ingredients in the recipe of the fudge are;

50 g butter 1 cup sugar 1 tbsp golden syrup 2 tbsp cocoa

1/2 cup coconut 1/2 cup raisins 1/4 cup chopped walnuts

Different batches have been beaten for differing amounts of time. You will not be told of the beating times, but batches will be identified by different letters eg A, B, C

Participation

If at any time you wish to withdraw from the taste panel you may do so.

Should you feel unwell then please inform me so 1 can get help for you. I have a cell phone with me and can contact emergency services should you suffer an allergic response to the fudge.

Once my investigation is completed, 1 will destroy all my raw data and at no stage will taste panelists be identified by name. Identification will be only by code.

Any queries about my study can be discussed with my supervisor who is

……

Ph……

Example Only

Agreement to participate in fudge taste panel

Name: ……

Age: under 16 years over 16 years

* I understand that I can withdraw at any time in this study YES/NO

* I know that all records will be non-identifying and that all raw data will be destroyed at the completion of the study YES/NO

* 1 want to know of your final results of this study YES/NO

Signature of taste panelist ……

Name of parent / caregiver if panelist under 16 ……

Signature of parent / caregiver if panelist is under 16 ……

Many thanks for your involvement

This is a sample of a form used when humans are involved in a project.
This shows the type of information that is necessary to provide participating individuals.