**Secondary Schools:
Debating the Ethics of Animal Use in Research:
Legislation**

Approximate timing: 1 hour

Required resources: PowerPoint presentation, non-technical summaries, discussion framework, fact sheet

This lesson will introduce students to the use of animals in research and how such research is regulated. It will give them a chance to act as an ethics review body and assess grants for research using animals.

**The lesson supports:**

Key stage 3

*Science - Applications and implications of science*

Examining the ethical and moral implications of using and applying science. The way scientific developments are achieved can raise ethical and moral issues, for example experiments on animals to produce drugs that may prolong human life.

*Citizenship - Rights and responsibilities*

a) Exploring different kinds of rights and obligations and how these affect both individuals and communities.

b) Understanding that individuals, organisations and governments have responsibilities to ensure that rights are balanced, supported and protected.

c) Investigating ways in which rights can compete and conflict, and understanding that hard decisions have to be made to try to balance these.

There are different kinds of rights, obligations and responsibilities - political, legal, human, social, civic and moral. Pupils should explore contested areas surrounding rights.

*Religious Education - Values and commitments*

Evaluating their own and others' values in order to make informed, rational and imaginative choices.

*PSHE: Personal wellbeing - Critical reflection*

Pupils should be able to reflect critically on their own and others' value

*English - Critical understanding*

a) Engaging with ideas and texts, understanding and responding to the main issues.

b) Assessing the validity and significance of information and ideas from different sources.

c) Exploring others' ideas and developing their own.

d) Analysing and evaluating spoken and written language to appreciate how meaning is shaped

Key stage 4

*How Science Works: Applications and implications of science*

Pupils should be taught to consider how and why decisions about science and technology are made, including those that raise ethical issues, and about the social, economic and environmental effects of such decisions

All pupils should develop their ability to relate their understanding of science to their own and others' decisions about lifestyles, and to scientific and technological developments in society.

*Citizenship*

Critical thinking and enquiry

Students should be able to:

1. question and reflect on different ideas, opinions, assumptions, beliefs and values when exploring topical and controversial issues and problems
2. research, plan and undertake enquiries into issues and problems, using a range of information, sources and methods
3. interpret and analyse critically sources used, identifying different values, ideas and viewpoints and recognising bias
4. evaluate different viewpoints, exploring connections and relationships between viewpoints and actions in different contexts (from local to global).

*Religious Education*

Values and commitments

Evaluating their own and others' values in order to make informed, rational and imaginative choices.

*PSHE: Personal wellbeing*

Critical reflection

Pupils should be able to reflect critically on their own and others' values

*English*

Critical understanding

a) Engaging with the details of ideas and texts.

b) Connecting ideas, themes and issues, drawing on a range of texts.

c) Forming independent views and challenging what is heard or read on the grounds of logic, evidence or argument.

d) Analysing and evaluating spoken and written language to explore their impact on the audience

Links to Babraham Institute research themes:

<https://www.babraham.ac.uk/our-research/healthy-ageing>

Links to Babraham Institute scientific services:

<https://www.babraham.ac.uk/science-services/biological-support-unit>

External links:

<http://www.understandinganimalresearch.org.uk/>

<https://www.ipsos.com/ipsos-mori/en-uk/attitudes-animal-research-2016>

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| **Learning outcomes** |
| All students will: | Be able to describe how well research using animals is regulated |
| Most students will: | Be able to critique non-technical summaries of research projects using animals |
| Some students will: | Be able to establish and debate their own opinion on non-technical summaries, based on an informed understanding |
| Key word/s | Concordat, AWERB, 3Rs, procedure, severity, non-technical summary |

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| **Teaching notes** | **Student learning activities**  |
| **Starter or ice-breaker activity** (10 mins)Discuss student opinions on the use of animals in research, reminding them to respect each other’s opinions throughout.Explain activity – students show their opinion by standing on a line across the classroom from ‘Strongly Agree’ to ‘Strongly Disagree’ Ask students at each end or in the middle to explain their answer | Slide 2Activity – students show their opinion by standing on a line across the classroom from ‘Strongly Agree’ to ‘Strongly Disagree’ and should be ready to explain their answer. Compare their opinions to that of the general public using the bar diagrams.Questions are on each slide – data is from national survey [IPSOS-MORI Public attitudes to animal research survey from in 2016](https://www.ipsos.com/ipsos-mori/en-uk/attitudes-animal-research-2016) |
| **Introduction** (5 minutes)Describe the Concordat on Openness in Animal research.Ask students to consider how organisations could fulfil their commitments – are they aware of existing examples e.g. annual report on numbers of animals used | Slide 4<http://concordatopenness.org.uk/> |
| **First activity** (10)Explain that research using animals is strictly regulated by the Home Office and that licences are required for each institution, project and scientist.Introduce the 3Rs and ask students to suggest what they might be (Replacement, Refinement, Reduction) as well as how they could be fulfilled.Discuss answers | Slides 5 & 6<https://www.gov.uk/guidance/research-and-testing-using-animals>Slides 7 & 8<https://www.nc3rs.org.uk/the-3rs> |
| **Principal Activity** (20)Explain the purpose and remit of Animal Welfare and Ethical Review BodiesExplain that online non-technical summaries must be published for all research projects using animalsDescribe severity levels of proceduresStudents to discuss a non-technical summary in groups, considering language, justification, numbers of animals used and severity of procedures.Discuss, including whether the students would have approved the projects | Slides 9 & 10Slides 11 – link to gov.uk websiteSlides 12 – severity levelsSlides 13 – activity description |
| **Plenary**Summarise from slide | Slide 14 |
| **Extension activities**Animals in Research (Legislation) Web Quest on the Babraham Institute website.Animals in Research Workshop 1 - Alternative model organisms | **Animals in Research (Legislation) Web Quest** Start at: <https://www.babraham.ac.uk/our-research/animal-research> and follow links to research pages, science services and other content on our website to inform your answers. For each question, keep a record of the web pages you have visited.1. What do you think are the key points of the Policy on using live animals in research at the Babraham Institute?2. Which of the 3Rs do you think is most important and which example from the Babraham Institute do you think is the most convincing?3. Do you think that the Babraham Institute website shows that it conforms to the Concordat on Openness in Animal Research? Explain your reasons.4. Which part of the ethical review process do you think is the most important? Explain your reasons. |