

2017 HOUSE EDUCATION

HB 1266


2017 HOUSE STANDING COMMITTEE MINUTES

Education Committee
Coteau A Room, State Capitol

HB 1266
1/17/2017
26985

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

Relating to students declining participation in animal dissections.

Minutes:

Attachment 1a 1b,1c,1d, 2, 3, 4 ,5a, 5b, 5c

Rep. Dobervich: I represent district 11 in Fargo. (attachment 1 A-D) I urge a do pass on HB 1266.

Rep. Pat D. Heinert: 5:26 It says "a student may decline to participate" so we are going to allow the student to make that decision?

Rep. Dobervivh: 6:11 The Student should be able to make that decision to decline the dissection.

They are not getting out of the assignment or activity, they just have an alternate choice on how to do the assignment. As adults we make choices that are different than the mainstream choice.

Rep. Zubke: 7:50 Do you know of any stories where the student asked to decline and the teacher wouldn't allow them to?

Rep. Dobervich: 8:12 I am not aware of any stories of them being declined. Many students are not aware that alternatives are available and that they can ask for alternatives. There are other ways of doing things.

Vice Chairman Schreiber-Beck: 8:54 They still have the ability to decline. They do not have to participate at all?

Rep. Dobervich: 9:34 The intention of this is that they must participate in the activity whether they chose the hands on they chose an other way.

Vice Chairman Schreiber-Beck: 9:50 I am looking at lines 6 and 7 and going on. In your mind what the bill says if they refuse to do the live dissection, they still have coursework to complete.

Rep.Dobervich: 10:45 Correct. I am very open to wording changes. They would have to participate in the once living animal dissection or something visual.

Rep. Rich S. Becker: What role if any does Peta have in this bill?

Rep. Dobervich: Peta has no involvement in this bill. I have not been contacted by them.

Rep. Rich S. Becker: 12:35 Are you aware that they did contact the Bismarck Public schools on this issue within the last year?

Rep. Dobervich: I was not aware of that.

Rep. Rich S. Becker: My reading of this is that a student may decline to participate?

Rep.Dobervich: 13:01 I am very open to wording changes. Students cannot refuse the lesson, they can refuse in the way to do it, but not the assignment.

Chairman- Mark S. Owens: 13:38 Paragraph 3 says if they chose to do that than they have to do this.

Rep. Pyle: 13:58 My daughters ag class, she went to be a veterinary, but she said it was cruel. Parental contact was done in this situation, not just leaving the student the power to make the decision.

Rep.Debervich: 15:16 We do not it isn't always being done there is no statue that says it must be done and there is no assessment of the different school districts in the state to insure that there are alternatives.

Rep. Pyle: How is that different from the violence the kids see on tv? where they see the killing of humans and animals?

Rep.Dobervivh: 16:16 Just like you can control what happens on tv, you can support your daughters. You had control you knew the activity was happening.

Rep. Pyle: 16:53 Yes we do have control what our kids watch on tv, I do not see the difference. Ag smells no matter what. I do not think this bill is necessary.

Rep. Heinert: 17:53 Could we accomplish the same things and leave some flexibility in for the schools if we instructed the superintendent of public instructions to adopt rules?

Rep.Dobervich: 18:16 We certainly can explore it. I can certainly talk to DPI to see if they are interested in that.

Rep. Heinert: 18:48 What programs would have to be used. I think it would be better if we had a universal approach DPI of vetting of which programs will be allowed within the schools to be utilized.

Rep. Guggisberg: Would you be open to amendments that did require parents to sign off on this as well? 19:47

Rep.Dobervich: 19:55 These kids are minors, and having parents involved in it is ok.

Rep. Guggisberg: The whole class can boycott the teacher, to have the parents involved in it can alleviate it that problem.

Rep.Dobervich: I think that would be a great amendment to add in.

Chairman Owens: Anyone in support of HB 1266.

TJ Jerke: North Dakota State Director for the Humane Society (attachment 2)

ChairmanOwens: Any questions?

Vice Chairman Schreiber-Beck: 24:12 Do you know from any surveys done in North Dakota if teachers are using live animals or using some other method of teaching?

Tj jerke: 25:00 I don't know however I would be happy to find out.

Chairman Owens: Are there any other questions? Is there any other in support, in opposition? 25:26

Jon Martinson: (attachment 3) Opposed to the bill. HB1266 is in search of a problem to fix. This is a problem this has been successfully dealt with at the local level by the teachers and there isn't any need for a state law that requires that state Superintendents of Public Instruction to send all the schools a letter indicating that this is an option.

Russ Ziegler: North Dakota Council of Educational Leaders (attachment 4) We request a do not pass recommendation.

Chairman. Owens: 32:48 Any questions?

Pete Hanibutt: 33:02 From North Dakota Farm Bureau, we think this is a bad bill and a bad idea. The bill pushes a political agenda in the classroom and we will oppose the agenda.

Chairman Owens: 33:32 Any questions?

Julie Ellingson: North Dakota Stockmen's Association. (attachment 5a-5c) We support a do not pass recommendation.

Chairman Owens: Closing hearing on 1266.

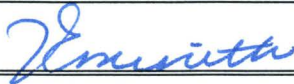
2017 HOUSE STANDING COMMITTEE MINUTES

Education Committee
Coteau A Room, State Capitol

HB 1266
1/17/2017
27020

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

Relating to students declining participation in animal dissections

Minutes:

Rep. Owens: Opened the meeting on HB 1266.

Rep. Pat D. Heinert: I received 2- 3 more emails today from science teachers today that are opposed to this bill.

Rep. Guggisberg: 00:30 I want to let the committee know to introduce this bill as well and I don't think this is a problem.

Chairman Owens: 2:02 We believe somewhere in code it already gives this ability. Based on what we have already heard is this a district issue? Or is this something that is in code?

Rep. Longmuir: 3:00 As a veteran of the school board member the one thing we hated to see come down was statue because when it came down it left up to us to take care of how it was supposed to be done.

Chairman. Owens: 5:00 closed the meeting.

2017 HOUSE STANDING COMMITTEE MINUTES

Education Committee
Coteau A Room, State Capitol

HB 1266
1/18/2017
27070

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

Relating to students declining participation in animal dissections

Minutes:

Rep. Owens: Opened HB 1266.

Rep. Longmuir: Made a motion for a do not pass on HB 1266

Rep. Guggisberg: second the motion.

Rep. Owens: Yes 13 No 0 Absent 1 Floor assignment **Rep. Gussisberg**

Date: 1/18/17Roll Call Vote # 1

**2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. HB 1266**

House Education Committee☐ Subcommittee

Amendment LC# or Description: _____

Recommendation: ☐ Adopt Amendment
☐ Do Pass ☒ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____Motion Made By Rep. Langmoir Seconded By Rep. Guggisberg

Representatives	Yes	No	Representatives	Yes	No
Chairman- Mark S. Owens	✓		Rep. Andrew Marschall	✓	
Vice Chairman- Cynthia Schreiber-Beck	✓		Rep. Bill Oliver	✓	
Rep. Rich S. Becker	✓		Rep. Brandy Pyle	✓	
Rep. Pat D. Heinert	✓		Rep. Matthew Ruby	✓	
Rep. Dennis Johnson	✓		Rep. Denton Zubke	✓	
Rep. Mary Johnson	✓		Rep. Ron Guggisberg	✓	
Rep. Donald W. Longmuir	✓		Rep. Corey Mock	AB	

Total (Yes) 13 No 0Absent MockFloor Assignment Rep. Guggisberg

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

HB 1266: Education Committee (Rep. Owens, Chairman) recommends **DO NOT PASS** (13 YEAS, 0 NAYS, 1 ABSENT AND NOT VOTING). HB 1266 was placed on the Eleventh order on the calendar.

2017 TESTIMONY

HB 1266

House Bill 1266

Alternatives to Dissection

Testimony of Representative Gretchen Dobervich

January 17, 2017 10:45am. House Education Committee

Attachment 1a

1/17/17

HB 1266

Chairman Owens and House Education Committee Members,

Good Morning, for the record my name is Representative Gretchen Dobervich. I stand before you today with a constituent initiated bill relating to the dissection of animals in K-12 classrooms.

For many years, students have learned anatomy through dissection of preserved once living animals. While many students are excited to see inside a frog or fetal pig, some, for religious, ethical or physical reasons would prefer an alternative. That is what HB 1266 serves to provide, an alternative to dissection for all public school students in North Dakota's K-12 classrooms.

Historically, preserved once living animals or charts depicting dissection were the only options available to students and teachers. Computer technology now offers software that gives students the opportunity to see inside animals with clearer images, less smell and in some cases simulated working organs and bodily systems.

Currently nine states give students the right to refuse dissection of a once living animal. Five states have less formal laws related to alternatives to dissection. Universities, including Cornell and University of Illinois Champaign-Urbana now offer alternatives at the college level.

The benefits of computer and video alternatives, beyond less smell, include cost reductions for schools, enhanced life science learning and environmental health. Over a three year period, schools who purchase software see a reduction of thousands of dollars saved through no longer needing to purchase preserved, once living animals and dissection equipment. There are also several no cost computer programs.

There have been over 30 research studies done on the efficacy of alternatives to dissection. Of these studies, over half showed a higher learning level for the students who utilized alternatives versus their peers who participated in traditional dissection methods.

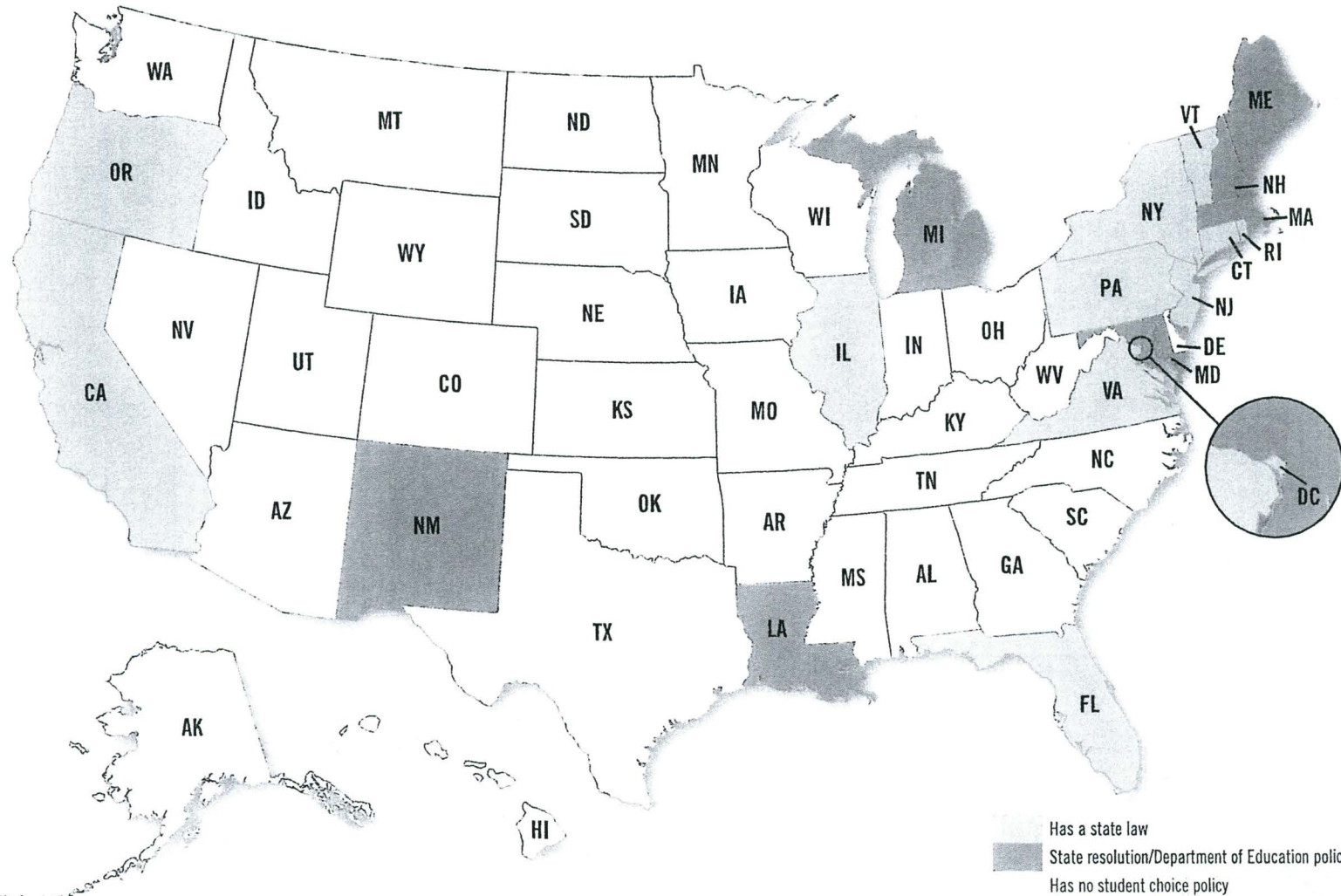
Formaldehyde and formalin, chemicals used in preserving once living animals, contain carcinogens, respiratory irritants and environmental pollutants. Improper disposal of animal remains and contaminated dissection tools can contaminate water and soil, with potentially harmful effects on ecosystems.

HB 1266 requires North Dakota public schools to have an alternative available upon request and the North Dakota Department of Public Instruction to notify schools in writing, at the beginning of each school year that they must accommodate requests for an alternative and have one available. This bill has been discussed with the Department of Education and North Dakota United and neither expressed concerns.

HB 1266 does not end traditional dissection or require financial investment on the part of North Dakota's public schools. It simply provides choice.

Chairman Owens and members of the committee I urge a do pass on HB 1266.

DISSECTION LEGISLATION



What color is your state? Add some color to your state by taking a stand for students and animals in the classroom!

Currently, there are 18 states and Washington, DC that allow students from K-12 to use alternatives rather than dissect an animal. The states include:

California	Illinois	Maryland	New Hampshire	New York	Rhode Island
Connecticut	Louisiana	Massachusetts	New Jersey	Oregon	Vermont
Florida	Maine	Michigan	New Mexico	Pennsylvania	Virginia

Contact Animalearn to help put your state on the map. Animalearn.org | info@animalearn.org

Alternatives to Dissection Websites

Virtual Dissections

The Mining Company (<http://biology.about.com/cs/dissections/>) hosts the following Virtual Dissections:

Cat Dissections Online	Virtual Frog Dissection Kit
Clam Dissection	Virtual Mouse Necropsy
Cockroach Dissection	The Virtual Pig Dissection
Cow's Eye Dissection	Rat Dissection Guide I and II
Crayfish Dissection	Sheep Brain Dissection: The Anatomy of Memory
Dissecting the Earthworm	Squid Dissection
The Interactive Frog Dissection	Starfish Dissection Tutorial

Froguts <http://www.froguts.com>

Human Anatomy
The Virtual Body <http://www.medtropolis.com/VBody.asp>
Body Quest <http://library.thinkquest.org/10348>
Visible Human Project <http://www.madsci.org/~lynn/VH>

Alternatives Loan Programs

The following organizations loan alternatives to animal dissection and live animal experimentation

Animalearn's Science Bank: <http://www.animalearn.org/sciencebank.php>

National Anti-Vivisection Society's BioLEAP Lending Program:
<http://www.navs.org/education/bioleap-lending-program>

Ethical Science Education Coalition's Alternatives Loan Library:
<http://www.neavs.org/resources/esecs-inventory-of-alternatives-to-dissection>

The International Network for Humane Education (InterNICHE):
Alternatives Database: <http://interniche.org/en/alternatives>
Alternatives Loan Systems: <http://interniche.org/en/loansystem>

Alternatives Databases:

NORINA (Norwegian Inventory of Audiovisuals): <http://oslovet.veths.no/NORINA>

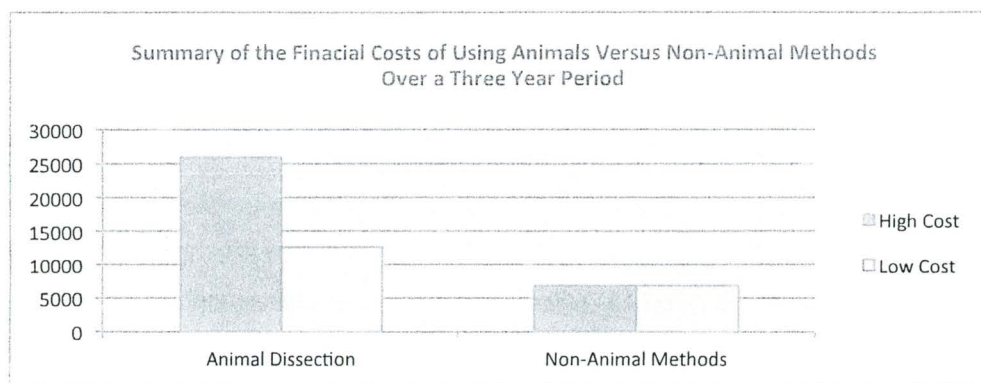
The NORINA database has information on over 3,000 computer programs, laser discs, films, slide series, 3-D models and classroom charts that can be used as alternatives or supplements to the use of animals in all levels of education.



Animal Dissection vs. Non-Animal Alternatives: A Cost Comparison

Non-animal methods of teaching anatomy and physiology have many benefits, including a reduction in costs. As this chart outlines, alternatives cost less than animal dissections and can oftentimes be used for a substantially longer period of time, once the initial purchase has been made. The following analysis is based on the needs of a typical biology department over a three-year period. Four of the most commonly dissected species - the cat, fetal pig, dogfish shark, and frog - are given as examples. For this chart, we assume a school has three biology classes comprising of 30 students each or 90 students total.

If the school chooses to use animal specimens to teach anatomy/physiology, we assume that a pair of students will dissect the specimen. So, there would be: 45 cats, 45 fetal pigs, 45 dogfish, and 45 frogs needed annually, or 135 (45x3) of each over a three-year period. If the school chooses to use alternative methods to teach anatomy/physiology, we assume that a pair of students will perform a virtual dissection or 45 students/year. The alternative methods used would be software and a model.



Cat

Cat Specimens		Cat Alternative		Cost Savings
High Cost for Cat Specimens (\$112.00 x 135) + Supplies (\$840.60)	\$15,960.60	McGraw Hill's Anatomy Revealed: Cat (\$51.00 x 45 students) & Ward's Cat Model (\$570.00)	\$2,865.00	<u>\$13,095.60</u>
Low Cost for Cat Specimens (\$50.00x135)+ Supplies (\$840.60)	\$7,590.60	McGraw Hill's Anatomy Revealed: Cat (\$51.00 x 45 students) & Ward's Cat Model (\$570.00)	\$2,865.00	<u>\$4,725.60</u>

Using non-animal alternatives for cats can save \$4,725.60 - \$13,095.60 / a three-year period

Fetal Pig

Fetal Pig Specimens		Fetal Pig Alternative		Cost Savings
High Cost of Fetal Pig Specimens (\$29.00 x 135) + Supplies (\$840.60)	\$4,755.60	Froguts Suite (including fetal pig and other animals) (\$299/year x 3 years) & Ward's Pig Model (\$485.00)	\$1,382.00	<u>\$3,373.60</u>
Low Cost of Fetal Pig Specimens (\$15.00 x 135)+ Supplies (\$840.60)	\$2,865.60	Froguts Suite (including fetal pig and other animals) (\$299/year x 3 years) & Ward's Pig Model (\$485.00)	\$1,382.00	<u>\$1,483.60</u>

Using non-animal alternatives for fetal pigs can save \$1,483.60 - \$3,373.60 / a three-year period

Dogfish				
Dogfish Specimens		Dogfish Alternative		Cost Savings
High Cost of Dogfish Specimens (\$22.65 x 135)+ Supplies (\$840.60)	\$3,898.35	BioLab Fish Suite (Site License) & Ward's Shark Model (\$385.00)	\$1,486.95	<u>\$2,411.40</u>
Low Cost of Dogfish Specimens (\$8.75 x 135) + Supplies (\$840.60)	\$2,021.85	BioLab Fish Suite (Site License) & Ward's Shark Model (\$385.00)	\$1,486.95	<u>\$534.90</u>

Using non-animal alternatives for fetal pigs can save \$534.90 - \$2,411.40 / a three-year period

Frog				
Frog Specimens		Frog Alternative		Cost Savings
High Cost of Frog Specimens (\$21.50 x 135)+ Supplies (\$840.60)	\$3,743.10	Digital Frog (Online Subscription) (\$299.50/year x 3 years) & Ward's Frog Model (\$180.00)	\$1,078.50	<u>\$2,664.60</u>
Low Cost of Frog Specimens (\$4.10 x 135) + Supplies (\$840.60)	\$1,394.10	Digital Frog (Online Subscription) (\$299.50/year x 3 years) & Ward's Frog Model (\$180.00)	\$1,078.50	<u>\$315.60</u>

Using non-animal alternatives for fetal pigs can save \$315.60 - \$2,664.60 / a three-year period

TOTAL COST SAVED BY USING ALTERNATIVES

\$7,059.70 - \$21,545.20 / A THREE YEAR PERIOD

The low and high prices of the preserved animals were obtained from the Carolina Biological Supply Company catalog (2016). Supplies (dissecting pan, scissors, forceps, scalpels, pins, droppers) are considered a onetime purchase during this three-year period.

The alternative prices were selected from the alternative companies (2016).

- McGraw Hill's Anatomy Revealed: Cat can be obtained from McGraw Hill at <http://shop.mcgraw-hill.com/mhshop/productDetails?isbn=0073525758>
- Froguts can be obtained at www.froguts.com
- BioLab Fish can be obtained at www.biolabsoftware.com/bls/fish.html
- Digital Frog can be obtained at www.digitalfrog.com
- Models can be obtained from Ward's Science at www.wardsci.com

1/17/17



Analysis of Studies Comparing the Use of Animals in Science Education to the Use of Humane Educational Methods

Historically animal use in science education has played an integral role in teaching anatomy and physiology as well as a variety of other disciplines. Animals have traditionally been used at all levels of schooling from primary to graduate school. And until several years ago, the pedagogy of such decisions was not questioned. However, in recent years, there has been an increase in concern for animals used in education; concurrently technology had developed to provide students and academics with viable alternatives. Animalearn has compiled a list of studies that compare animal use versus humane teaching methods in science education.

Animalearn's list includes over 60 studies many of which confirm the positive learning outcome or equivalent effectiveness of humane teaching methods in imparting knowledge or clinical or surgical skills. Some studies conclude that alternatives also lower costs, decrease the amount of time required to learn, and increase student comfort levels. This list is divided into four categories based on education level and course of study: secondary education, undergraduate, veterinary school, and medical school. Each category is further divided into three sections based on the studies' results: *the positive learning outcome using the humane teaching method, the equivalent outcome using the humane teaching method versus the animal use method, and the undetermined or negative outcome using the humane teaching method.*

Secondary Education

Study	Discipline	Teaching Method	Positive	Equivalent	Negative or Undetermined
Akpan, J. et al 2010	Biology	Computer simulation	✓		
Boothby, C. 2009	Biology	Virtual Dissection	✓		
Cross, T.R. et al 2004*	Biology	Virtual Dissection			✓ ₁
Fowler, H.S. et al 1968*	Biology	Film	✓		
Kariuki, P. et al 2001*	Biology	CD-ROM			✓ ₂
Kinzie, M.B. et al 1993*	Biology	Computer simulation		✓	
Lalley, J.P. et al 2010	Biology	Virtual Dissection	✓		
Nieb, M.J. 1985*	Biology	Lecture		✓	
Warszalek, C.S. et al 1999*	Biology	Videodisc		✓	
McCollum, T.L. 1987*	Biology	Lecture	✓		
Montgomery, L. 2008	Biology	Virtual Dissection		✓	
Strauss, R.T. et al 1994*	Biology	Videodisc		✓	
Velle, S. et al 1999**	Biology	Virtual Dissection	✓		
Youngblut, C. 2001	Biology	Virtual Dissection	✓		

Undergrad Education

Study	Discipline	Teaching Method	Positive	Equivalent	Negative or Undetermined
Clarke, K.A. 1987**	Neurophysiology	Computer simulation		✓	
Cohen, P.S. et al 1991*	Psychology	Field Studies		✓	
DeHoff, M.E. et al 2011	Physiology	Clay Modeling		✓	
Dewhurst, D.G. et al 1994*	Physiology	Computer simulation		✓	
Dewhurst, D.G. et al 1993*	Physiology & Pharmacology	Computer simulation		✓	
Dewhurst, D.G. et al 1988	Physiology	Computer simulation			
Downie, R. et al 1995*	Biology	Models		✓	
Guy, J.F. et al 1992*	Anatomy	Videodisc		✓	
Huang, S.D. et al 1991*	Biology	Videodisc	✓		
Henman, M.C. et al 1983*	Pharmacology	Biovideograph	✓		
Hughes, I.E. 2001**	Pharmacology	Computer simulation			✓ ₃
Leonard, W.H. 1992*	Biology	Videodisc		✓	
Matthews, D. 1998*	Biology	CD-ROM			✓ ₄
More, D. et al 1992*	Biology	Virtual Dissection	✓		
Motoike, H.K et al 2009	Physiology	Clay Modeling	✓		
Phelps, J.L. et al 1992*	Physiology	Videodisc	✓		
Redavec, E.D. et al 1977*	Biology	Virtual Dissection	✓		
Prentice, ED et al 1977*	Anatomy	Labeled Slides		✓	

Taeger, K.R. 2006	Biology	Virtual Dissection		✓	
Waters, J.R. et al 2005*	Anatomy	Clay Modeling	✓		
Waters, J.R. et al 2010	Anatomy	Clay Modeling	✓		
Yuza, S. 2010	Biology	Virtual Dissection	✓		

Vet School

Study	Discipline	Teaching Method	Positive	Equivalent	Negative or Undetermined
Abutarbush, S.M. et al 2006**	Clinical Skills	Computer simulation	✓		
Baillie, S. et al 2005	Clinical Skills	Computer simulation	✓		
Bauer, M.S. et al 1992*	Surgery	Survival Lab		✓	
Carpenter, L.G. et al 1991**	Surgery	Cadaver		✓	
Erickson, H.H. et al 1993*	Physiology	Computer simulation	✓		
Fawver, A.L. et al 1990*	Physiology	Computer simulation		✓	
Greenfield, C.L. et al 1995*	Surgery	Model		✓	
Griffon, D.G. et al 2000*	Surgery	Model	✓		
Johnson, A.L. et al 1989*	Surgery	Model	✓		
Linton, A. et al 2005	Anatomy	Computer simulation		✓	
Olsen, D. et al 1996*	Surgery	Model		✓	
Pavletic, M.M. et al 1994*	Surgery	Cadavers and Models – The Alternative Tufts Program Simulator		✓	
Smeak, D.D. et al 1994**	Surgery				✓ 5
Theoret, C.L. et al 2007	Anatomy	Film			✓ 6
White, K.K. et al 1992*	Surgery	Alternative Surgical Program		✓	

Medical School

Study	Discipline	Teaching Method	Positive	Equivalent	Negative or Undetermined
Bowyer, M.W. et al 2005	Clinical Skills	Clinical Skills	✓		
Granger, N.A. et al 2007	Anatomy	Anatomy			✓ 7
Jacomides, L. et al 2004	Clinical Skills	Clinical Skills		✓	
Jones, N.A. et al 1978*	Anatomy	Anatomy		✓	
Leathard, H.L. et al 1995*	Physiology & Pharmacology	Physiology & Pharmacology		✓	
Lilienfield, L.S. et al 1994*	Physiology	Physiology	✓		
Ramshaw, B.J. et al 2001	Surgery	Surgery	✓		
Samsel, R. W. et al 1994*	Physiology	Physiology	✓		

1. Negative: BioLab Frog was used in this study. The first year of the study, both study groups were tested using real frogs. The second year of the study, the groups were tested using the simulation and the real frog. Students dissecting real frogs performed better on the lab test using frogs.
2. Negative
3. Undetermined: Performance of students using computer simulation was higher than those who used the wet labs. However when assessing details of the wet lab, the computer simulation group did poorer.
4. Negative: This study had a small sample size of 8 students dissecting fetal pigs and 12 using MacPig. The 8 that used the real fetal pigs scored significantly higher on an oral test using a prosected fetal pig.
5. Negative-Simulator was suitable for teaching overall gastrotomy technique but could not simulate live tissue.
6. Negative
7. Negative



ANIMALS, ETHICS, AND EDUCATION

801 Old York Road, #200
Jenkintown, PA 19046
215-887-0816
www.animalearn.org

Attachment 2

HB 1266

1/17/17

Testimony in Support of HB 1266
Presented to the House Education Committee
January 17, 2017
TJ Jerke, North Dakota State Director
The Humane Society of the United States

Chairman Owens, and member of the Committee, on behalf of The Humane Society of the United States and our supporters in North Dakota, thank you for this opportunity to submit testimony in support of HB 1266, which would create a uniform standard for students who decline to participate in, or observe, dissection-related course work.

Jonathan Balcombe, Ph.D writes in, *The Use of Animals in Higher Education*, that, "Dissection persists because it is a readily available way for a teacher to bring a student closer to a once-living organism. Who can fault a teacher for wanting to do that? However, it has a veneer of "real science" to it. Because it involves once-living animals, it gives the illusion that it is that much closer than a simulation to real-world, "cutting-edge" science."

For years, advances in technology and increasing societal concern for animals, have brought about an increased desire to use alternative methods that produce the same, if not better, outcomes in students educational success.

Dissection alternatives, such as mobile apps and 3-D models, are readily available, often at a fraction of the cost of animal specimens, providing an important cost savings for teachers. Dissection alternatives can also be reused, unlike animal specimens. Organizations such as Animalearn offer many different, and often free, alternative options from Pre-K to High School.

Animalearn, an organization dedicated to fostering an awareness of and a respect for animals used in education, surveyed teachers who have borrowed items from The Science Bank, Animalearn's free loan program of over 500 dissection alternatives. Their questionnaire found that 62% of the teachers who borrowed the materials, used the products as a replacement for animals. Of those teachers, 88% felt that they were "helpful as a replacement to using animals." And all of them had favorable things to say about the dissection alternatives that were borrowed.

Lastly, it's important to note that the use of alternatives gives students an opportunity to learn about other living creatures they may not have otherwise had access to.

Chairman Owens and members of the committee, thank you for your time today. I hope you will give this bill a do pass recommendation.

Attachment 3

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HB 1266 – Testimony

Jon Martinson, Executive Director
North Dakota School Boards Association
January 17, 2017

When education associations would get together to visit about issues, Dr. Larry Klundt, former executive director of the North Dakota Council of Educational Leaders, would ask a very insightful question that got us all focused. That question was, "What is the problem we are trying to fix?"

House Bill 1266 is a bill in search of a problem to fix. Opposition to animal dissection by students does not rise to the level of requiring a new state law.

When an individual from *The Humane Society of the United States* called me and asked for our support for this bill, I asked him if he was aware of any student in North Dakota who objected to dissection and was not provided an alternative. He said no.

I called area high schools and learned it's not an issue. Legacy High School has not dealt with this issue at all.

The principal at Bismarck High School told me that in his seven years, there have been three or four occasions in which a student objected to dissection and those were successfully dealt with at the classroom level. On one occasion, a student participated in an on-line dissection.

The NDSBA requests a DO NOT PASS on HB 1266.

Attachment 4

HB 1266

1/17/17

House Bill No. 1266

Testimony in Opposition

North Dakota Council of Educational Leaders – Russ Ziegler

Good morning Chairman Owens and members of the House Education Committee. For the record I am Russ Ziegler, the assistant director of North Dakota Council of Educational Leaders. I would like to thank you for allowing me to testify in opposition to House Bill 1266.

This is a highly debated topic in science classes in North Dakota as well as across the country. I would like to start with an excerpt from an article I read while researching this topic.

This is from *Current Events, a Weekly Reader* publication:

Teachers who use dissections to teach their students about biology say the students learn essential lessons, not just about science and anatomy, but also about themselves. They say textbooks, plastic models, and computer simulations can't compare...Dissecting animals allows students to see how bodies operate from the inside. Future biologists, doctors, veterinarians, and other scientists need to understand how bodies work, supporters of dissection argue. They say books and computer programs can't show the many variations among living creatures of the same species or demonstrate how fragile an animal's internal organs can be.

I really like the comment about how dissections can teach students about themselves. My background in is mathematics and science, however not the biological sciences. I personally did not like dissection in my high school biology class but it did a couple of things for me. First it reinforced that my passion was not in the medical field. High school should be a time for students to experiment, try new things, see what interests them. For some it might do the opposite. Dissection might lead them into the biological science or medical field. It might solidify their passion for veterinary medicine or wildlife management. The second thing it did for me was to make me step out of my comfort zone. If a student can refuse all the opportunities that are placed in front of them because of fear of the unknown or because they are uncomfortable

what are they truly going to experience? Psychologists have found that stepping out of our comfort zone and dealing with a little anxiety can help people grow and learn.

Schools should be places where students can be comfortable enough to try new things and see where their niche may be in life. North Dakota Council of Educational Leaders feels that this is a topic that should be kept with the local school board. Teachers are the educational experts and they must determine the best curriculum for their content area and community. This curriculum is then approved or denied by the local school board. A biology teacher may have a different feeling towards dissection because all students are required to take their course, as compared to an anatomy teacher where the students choose to take their course. HB 1266 does not differentiate between these two scenarios. I will use my wife as an example here. She has taught biology and anatomy in the past. For the biology students, she did have the option for students to do the virtual dissection if they felt uncomfortable with the actual dissection. The students in her anatomy course did not have that same option. The anatomy course was not required and the students who took that course knew what was expected of them. But again that was a local decision that was approved by the local school board. On a side note, during the 8 years she taught biology she only had one student choose to do the virtual dissection.

It comes down to this one simple fact – curricular decisions should be locally decided as a team between the teacher, administrative leadership and the locally elected school board. These issues are one of many that are most appropriately handled student by student and case by case within a locally led district and should not be mandated by state statute. We respectfully request a DO NOT PASS recommendation.

1/17/17

North Dakota Stockmen's Association
Testimony on HB 1266
Jan. 17, 2017

Good morning, Chairman Owens and members of the House Education Committee. For the record, my name is Julie Ellingson, and I represent the North Dakota Stockmen's Association, an 87-year-old cattle producers' trade association representing more than 3,000 ranch families in the state.

We stand in opposition to HB 1266, which would allow students to arbitrarily deny participation in dissection and other animal-related learning experiences.

First, in order to remain strong and effective in raising livestock and meeting the global food demands of a growing population, the livestock industry will need to draw on the next generation of agricultural professionals to achieve those objectives. Tomorrow's ranchers, veterinarians, nutritionists, geneticists and other support professionals are the students of today, who are gaining invaluable hands-on experience and training through dissection and animal projects in the classroom. Working with animals firsthand can spark students' interest in science, as well as a general respect for life, while reinforcing key concepts. Limiting these experiences without good reason limits the career-readiness of those who will be the agricultural leaders of tomorrow. Pictures, diagrams and videos can be useful teaching tools, but cannot compare to the "real deal." This premise was supported overwhelmingly by teachers in an April 2012 study published in the *International Journal of Environmental and Science Education*. Teachers indicated that alternatives were not adequate replacements for dissection, and regarded them as "inferior substitutes."

Second, this bill would extract local decision-making and teacher discretion about the use of animals and animal projects in the classroom and replace them with a heavy-handed state mandate about how to teach. It would also place a burden on teachers and school districts who would have to provide an alternative option to those who opt out of the regularly scheduled activities, doubling their workload and unnecessarily inflating the cost of education.

Finally, we are opposed to this bill, as sends the message that the use of animals for scientific or educational purposes is unethical or inappropriate, as it allows students to deny participation for no reason. Students aren't allowed to opt out of math or English assignments, for instance, but they would be allowed to opt out of this, which signals to them that it must be inappropriate. We disagree with this notion, and believe that this bill would distort students' view on animal welfare issues.

For these reasons, the North Dakota Stockmen's Association opposes HB 1266 and asks for your do-not-pass recommendation on the bill.

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Attachment 36

HB 1266

1/17/17

Legislative Assembly
of North Dakota
Introduced by
Representatives Dobervich, Holman
Senator Mathern

A BILL for an Act to create and enact a new section to chapter 15.1
19 of the North Dakota
Century Code, relating to students declining participation in animal
dissections.

Hello, my name is Julie Fleck and I have taught science at Mandan High
School for 20 years. I am very opposed to the HB1266. As a teacher we follow
ethics codes : (Read [NSTA-Duty or Standard of Care](#))

I feel the benefits of students doing dissections and other projects is very
beneficial, we are trained in our profession to deal with all types of issues.
There have been times when I have made alternative assignments for my
students. It certainly does not need to be a LAW. I feel as we teachers have a
good sense of judgement and can tell when a student truly is opposed or it
makes them sick that we will adjust accordingly – I fear that some along with
their parents will just use this an excuse to get out of work, when truly hand on
experiences are proven the best. Would you want a doctor to operate on you
having never practiced it before? We teachers truly care about the well- being
of all of our students. If a teacher does not they will not last in our profession.

Thank you for your time and PLEASE vote no on this bill.

Sincerely,
Julie Fleck
Mandan High School
Biology and Ecology instructor

Dissection Alternatives Save Money

Scenario: 3 classes of 30 students each (90 students), working in pairs (45 dissections) each year

Dissection: Cost for 3 years

Frog Dissection

45 Dissection Kits ¹ (45 @ \$7.00 each)	\$315.00
45 Dissection Pans ² (45 @ \$18.50 each)	\$832.50
45 x 3 years = 135 Frog Specimens ³ (135 @ \$5.90 each)	\$796.50
TOTAL	\$1944.00

Fetal Pig Dissection

45 Dissection Kits ¹ (45 @ \$7.00 each)	\$315.00
45 Dissection Pans ² (45 @ \$18.50 each)	\$832.50
45 x 3 years = 135 Fetal Pig Specimens ⁴ (135 @ \$22.50 each)	\$3037.50
TOTAL	\$4185.00

Alternatives: Cost for 3 years

Frog Dissection

- **Virtual Lab (Virtual Frog Dissection)** FREE (savings \$1944.00)
- **Punflay Frog Dissection**
45 iPad Apps x \$1.99 each⁵ \$89.55 (savings \$1854.45)
45 desktop programs x \$1.99 each \$89.55 (savings \$1854.45)
- **Digital Frog**
45 virtual dissections (Lifetime licensing) \$750 (savings \$1194.00)
- **Froguts** (300 logins/school/day)
\$400/year x 3 years \$1200 (savings \$744.00)

Fetal Pig Dissection

- **Whitman College (Virtual Pig Dissection)** FREE (savings \$4185.00)
- **Carolina Biological Supply Company**
Fetal Pig Anatomy Interactive Science Activity FREE (savings \$4185.00)
- **Froguts** (300 logins/school/day)
\$400/year x 3 years \$1200 (savings \$2985.00)

Pricing information current as of July 24, 2014. Pricing reflects a one-time charge for dissection kits and pans.

Products selected from Carolina Biological cited as "most frequently purchased" according to customer service representatives.

1. Carolina Biological. Standard Dissecting Kit I (#621094).
2. Carolina Biological. Dissecting Pan, Aluminum, with vinyl dissecting pad (#629004).
3. Carolina Biological. Carolina's Perfect Solution® Preserved Frog X-Jumbo Plain Pail 4-5" (#227444).
4. Carolina Biological. Carolina's Perfect Solution® Preserved Pig, Plain, Bulk Bag, 10-13" (#228406).
5. This discount is possible if your school enrolls in Apple's Volume Purchase Program (VPP) and purchases >20 apps.

Attachment 5c

HB 1266

1/17/17

January 16, 2017

House Education Committee
State Capitol
600 East Boulevard
Bismarck, ND 58505-0360

RE: HB No. 1266, Dobervich, Holman, Mathern

To Whom It May Concern,

My name is Tanasha Wanner. I am an agricultural education instructor at Mandan High School in Mandan, North Dakota. I am writing to express my concerns about House Bill No. 1266 regarding animal dissection – participation. The purpose of this bill is to provide students with an alternative assignment to dissections or other important course study methods, while still providing them an education about the subject matter being discovered through the means of the dissection, etc. This bill is very disconcerting for several reasons, which I will highlight for you below.

In this bill, it is stated that the alternative assignment must be of equal time and effort as the assigned dissection or like activity. In many matters of dissection, this is simply not possible. The dissection provides students a hands-on means of learning how to properly use tools important in many careers. For example, veterinarians, vet assistants, doctors, nurses, ranchers, and zookeepers may all use these skills daily in their given occupations. With an alternative assignment, we need to also offer this type of educational skill to those students, as it is required to meet a course objective. Next, we must ensure that a student can easily identify the parts that we are dissecting. This is one of the main purposes of the dissection itself. It allows students to see the actual item that was being discussed in class and how it works. In order for a student not completing the dissection to fully understand those parts and organs and how they function, they must then create some type of color-coded, 3D model to imitate that of the dissection in order to completely understand that material which the dissection covered. Realistically, this will usually require more time; however, this bill does not allow for that, further limiting not only the educator, but also the student.

In addition, let us keep in mind the main purpose of what these students are to be completing. In my case, these students are learning to understand the world of agriculture, to others it may be for students to understand the world of biology. In order for these students to understand these items, it is best for them to see that actual material in reality, not a model. One activity that students complete is dissecting fetal pigs to learn the parts of the digestive system. The students go through an online program to walk them through the dissection while seeing what the modeled version actually looks like. Student understanding and material retention increases,

while also spiking an interest into science related learning and careers. Their interactions with organisms is one of the most effective methods to achieving many goals and standards outlined at both the state and national level, while also developing researching and scientific skills.

Lastly, alternative assignments may be easily attainable in some cases and in others very difficult to accomplish in a way to ensure all educational components are covered. In the case of agricultural education, perhaps a class is going to incubate eggs to hatch them out. They can candle eggs each day to see the development and watch the young chicks break out of their shells. A student opting out of this activity can go online, research the topic, and draw on a poster all twenty-one days' worth of development of the chick; however, still probably requiring more time but learning the same material. Now, what if, for example, this bill would allow a student to opt out of a classroom study on the effects of the type of feed on animal? So, as a class, if students wanted to experiment on different types of chicken feed offered at the store to see if it makes a difference on the weight of the eggs produced by the chicken, this bill allows a student to choose not to participate in that but to do an alternative assignment. What would this alternative assignment look like? We need to provide students with the means of learning and understanding the scientific process, while also providing them an understanding of the effects of feed and nutrition on the outcome of a living organisms product. This alternative assignment may not be physically or financially feasible to the school or student involved and most likely would not have all of the educational benefits included.

After hearing the above reasons, I hope that you also find yourself in opposition of House Bill No. 1266 regarding animal dissection – participation.

Thank you,

Tanasha Wanner