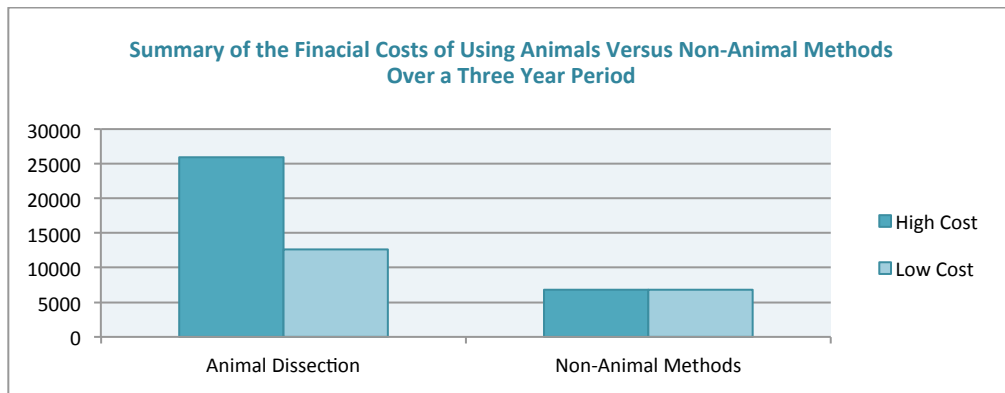


Animal Dissection vs. Non-Animal Alternatives: A Cost Comparison

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	Cost	Cat Alternative	Cost	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	Cost	Fetal Pig Alternative	Cost	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



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