

# Can Frogs Dance?

Length:	30 minutes
School:	Mineral Springs Middle School
Location:	Winston-Salem, N.C.
Grade:	7
Teachers:	Noël Grady-Smith, Dance Burl Hammock, Science Joan Celestino, Language Arts
Description:	Students study dance and anatomy and debate a frog's admission to a ballet company.

## About This Program

Noël Grady-Smith teaches dance as an elective, and she also initiates many collaborations with non-arts teachers. This program focuses on a project she initiated with science teacher Burl Hammock and language arts teacher Joan Celestino.

In biology class, seventh-graders are dissecting frogs to compare their muscular and skeletal systems with those of humans. Burl and the science students go to the dance studio for special ballet classes that emphasize the relationship of the human anatomy to dance movements. Noël then joins the students in the science lab for the dissection, to help analyze how frogs move.

Joan gives the science students an unusual assignment: they will debate whether a frog should be allowed to join the local ballet company. Students split into teams to debate and evaluate the issue. A lively exchange takes place, giving the teachers a dynamic way to assess what the students have learned.

## Arts and Non-Arts Standards Addressed in This Program

Standards listed refer to the McREL Compendium of Standards and Benchmarks, a synthesis of national standards in each of the disciplines, found at [www.mcrel.org](http://www.mcrel.org).

### Dance

Standard 1: Identifies and demonstrates movement elements and skills in performing dance

### Language Arts

Standard 8: Uses listening and speaking strategies for different purposes

### Science

Standard 7: Understands biological evolution and the diversity of life

# Viewing Suggestions

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## Who Should Watch This Program

*Teachers*—"Can Frogs Dance?" will be especially interesting to teachers looking for lively ways to connect instruction.

*Administrators and professional development providers*—This program can serve as an example of curriculum integration at the most ambitious level—showing how distinctly different areas of study can be usefully brought together.

## Before You Watch

Respond to the following questions.

- What is the science behind dance?
- How can dance influence the way the human and animal muscle structure is viewed in science class?
- What role could the arts play in a unit about frog and human anatomies?
- What advantages might there be to participating in your collaborator's class?

## Watch the Program

As you watch, note how actively Noël participates in Burl's science classes, and vice versa. How does this participation inform their teaching? How does this influence how they relate to the students and to the integrated instruction content? Write down what you find interesting, surprising, or especially important about their collaboration.

## Reflect on the Program

- How did the debate about a frog's attempt to join the ballet company serve to deepen the students' understanding of anatomy and dance? What evidence did you see that students were able to apply what they were learning?
- How did the debate make it possible for students who don't express themselves well in class to organize ideas and construct persuasive arguments?
- How did the debate's structure make it possible for quieter students to speak up?

# Additional Resources

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Consult some of these resources for more information.

## Books

Daley, Patrick, & Dahlie, Michael S. Fine, *50 Debate Prompts for Kids*. New York: Scholastic, 2001. ISBN: 0439051797

Davidson, Josephine. *The Middle School Debater*. Bellingham, Wash.: Right Book Company, 1997. ISBN: 0962825247

Elliott, Donald, & Arrowood, Clinton. *Frogs and the Ballet*. Ipswich, Mass.: Gambit of Meeting House Green, 1984. ASIN: 0876450990

Giftet, Gary Alan. *Tongues: High School Debate and Adolescent Culture*. Princeton, N.J.: Princeton University Press, 2001. ISBN: 069107450X

Vaganova, Agrippina. *Basic Principles of Classical Ballet*, (revised edition). New York: Dover Publications, 1969. ISBN: 0486220362

Wingerd, Bruce D. *Frog Dissection Manual (Johns Hopkins Dissection Series)*. Baltimore, Md.: Johns Hopkins University Press, 1988. ISBN: 0801836018

## Web Sites

**Computing Sciences, Berkeley Lab: Virtual Frog Dissection Kit:** A place to dissect a digitized frog, make movies, and play the Virtual Frog Builder Game  
<http://www-itg.lbl.gov/ITG.hm.pg.docs/dissect/info.html>

**The Ology Website:** A site for exploring many scientific topics including marine biology and biodiversity  
<http://ology.amnh.org/>

**Dance Educator's Coalition (DEC) of Minnesota:** A network formed in 1986 to provide emotional and professional support to dance educators  
<http://www.pconline.com/~dec/>

**The National Dance Education Organization (NDEO):** A voice for the field in legislatures, schools of dance, preK-12 schools, and institutions of higher education throughout the country  
<http://www.ndeo.org/>

**Journal of Dance Education (JODE):** An organization advancing knowledge in dance education, encouraging practical application of current research, and promoting quality dance instruction  
<http://www.jmichaelryan.com/JODE/jode-ad.html>

# Notes

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