

Darwin and the Kid

Shakespeare-in-the-Schools

Teacher Guide



Creative teaching. Lifelong learning.

Description

Book a trip on the USS Beagle with Darwin and the Kid. A young student struggles with his science homework until he receives an unlikely mentor: Charles Darwin himself. They embark on an interactive voyage that combines high-tech audiovisual elements with live acting. At 50 minutes, this fast-paced, multi-media production introduces students to the theories of Darwin and reinforces the knowledge and skills in Biological Sciences for seventh and tenth graders identified in the Pennsylvania Academic Standards for Science and Technology.

Program Objectives

Students will learn about the theories of Charles Darwin and the mechanisms of the theory of evolution. They will be able to explain basic concepts of natural selection and the mechanisms of the theory of evolution.

Biography

Founded in 1980, Shakespeare-in-the-Schools mission is to bring Shakespeare and other classic theater forms to students throughout Western Pennsylvania and the tri-state region. The organization demonstrates through live performance the excitement and accessibility of the classics. Shakespeare-in-the-Schools' core audience always has been, and will remain, the K-12 student and teacher.

Shakespeare-in-the-Schools educates and engages students and teachers with Shakespeare and other classic works through: touring shows, field-trip matinees, K-12 artist residencies, teacher workshops, talk back sessions, and study guides.



Academic Standards

This program may be used to address PDE Academic Standards in the following curriculum areas:

Science & Technology

- 3.1 Unifying Themes
- 3.2 Inquiry & Design
- 3.3 Biological Sciences
- 3.5 Earth Sciences
- 3.7 Technological Devices

Environment & Ecology

- 4.3 Environmental Health
- 4.6 Ecosystems and their Interactions
- 4.7 Threatened, Endangered & Extinct Species
- 4.8 Humans & the Environment

History

- 8.1 Historical Analysis & Skills Development
- 8.4 World History

Arts and Humanities

- 9.1 Production, Performance and Exhibition of Dance, Music, Theatre and Visual Arts
- 9.3 Critical Response
- 9.4 Aesthetic Response

Grades 7-12

Teacher Guide

Before the Program

Discussion Questions

- How do actors tell a story on stage? What are some of the differences between the way actors, teachers and newscasters tell stories?
- Prior to the performance, ask the students what they know about Charles Darwin, the theory of evolution and natural selection. Following the performance ask students to revisit the list and add facts that they did not know before.
- Throughout the program the Kid and Darwin learn from each other. What are some of the things that the Kid taught Darwin? How do you think the play would be different if it were set 20 years earlier? What about 20 years into the future?
- Why do you think the Kid refers to his new classmates as "aliens"? At the beginning of the play how does he react to the "aliens" and his new home? Compare and contrast this behavior to the way Darwin reacted when he encountered an unfamiliar creature or setting. How do you think the Kid will behave in response to his new environment following his encounter with Darwin?
- Why do you think that a rap was included in the performance? How would the program have been different without the rap? What would be some different ways of employing a mnemonic device to help audience members remember the information presented in the play?

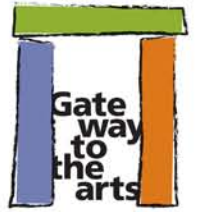
What to Look for in a Performance

The Technology of Darwin and the Kid

With *Darwin and the Kid*, Shakespeare-in-the-Schools (SITS) is proud to initiate a partnership with the **Educational Technology Center (ETC)** at Carnegie Mellon University. They advised, facilitated, and processed all of the technology necessary to make Darwin "appear" to Charles on stage.

To create the magical appearance of the 18th century scientist, SITS held several recording sessions with Rick Kemp, the actor playing Darwin on screen. Long rehearsals helped to blend Darwin's actions on screen with those of the live actor playing the student. Meanwhile, ETC was producing the interactive and audiovisual material to play alongside the recorded video, providing a content-rich, audience-centered environment in which students will be able to learn definitions and cite examples of covered concepts. Finally, ETC condensed all of this information into a high-def Blu-Ray format, and compiled our touring technology package, which all fits (with set and people) into a minivan! SITS is thrilled to be working with cutting-edge technology innovators, and hopes that you and your class enjoy the experience too!





Further Explorations

*Note to Teachers: the Music and Art Department has an extensive collection of CDs, LPs, images and DVDs, many of which may be sent out to your local library branch for your convenience. Call the Music or Art Department at 412-622-3105 and the staff will assist you in researching materials appropriate for your grade and curriculum. You may also search for materials on-line at <http://catalog.einetwork.net/search>

Books

Meyer, Carolyn. *The true adventures of Charley Darwin*, Boston : Harcourt, 2009.

Sis, Peter. *The tree of life : a book depicting the life of Charles Darwin, naturalist, geologist & thinker*. New York : Farrar Straus Giroux, 2003.

Original Texts on the Web

Searchable online text of Darwin's *The Origin of Species*:
<http://www.talkorigins.org/faqs/origin.html>

The Darwin Correspondence Project – an archive of Darwin's letters and writings:
<http://www.darwinproject.ac.uk>

<http://www.pbs.org/wgbh/evolution/educators/lessons/index.html> - PBS Online Lessons for Students: Learning Evolution

On the Web

Shakespeare-in-the-Schools website www.play.pitt.edu/sits

TeacherTube.com Music video containing portraits and biography of Charles Darwin

http://www.teachertube.com/viewVideo.php?video_id=47350&title=Darwin&vpkey=&album_id=

Popular PBS program NOVA

A website with many useful lesson plans and teacher's guides. Follow the "Evolution" link on the main page.

http://www.pbs.org/wgbh/nova/teachers/resources/subj_06_03.html NOVA Teachers

Here are some of SITS' favorite labs and discussions:

- **Wolf to Dog** – dry lab about the evolution of the domestic dog
- **The Missing Link** – students use items from a hardware store to model cladistics and family trees
- **Bird Brains** – students use DNA evidence to classify birds into evolutionary relationships; optional video clips also available

Access Excellence

<http://www.accessexcellence.org/AE/AEPC/WWC/1995/>

A teacher-generated resource full of lesson plans for evolution, fossils, natural selection, and other Darwin-related concepts.

Our favorites:

- **Automobile Phylogenetic Tree** – apply evolutionary concepts to cars
- **Beans and Birds** - simulate the pressures of natural selection on seeds
- **Viruses and Host Evolution** – writing and discussion activity about the co-evolution of viruses and hosts