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For Teachers

LESSON PLANS AND GUIDES FOR TEACHERS [BACK TO FOR T](#)

 LESSON PLANS: HIGH SCHOOL

The Music in Us
Subject: Language Arts, Science
Grade Level: 9-12

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Background Activities

Activity One

The purpose of this activity is to encourage students to explore music in nature.

1. Brainstorm possible answers to the following questions:

- What is your favorite sound in nature?
- What does the music of nature sound like?

2. As a class, explore the following Web sites:

<http://whyfiles.org/114music/3.html>
<http://whyfiles.org/114music/2.html>
<http://whyfiles.org/shorties/turtle.html>
http://www.bigai.ne.jp/~miwa/sand/what/e_what.html

These Web sites contain examples of the sounds of music in nature.

3. Ask the students to collect examples of music they like that also contains sounds one might hear in nature. Have students share these examples with the class.

Steps

Activity One

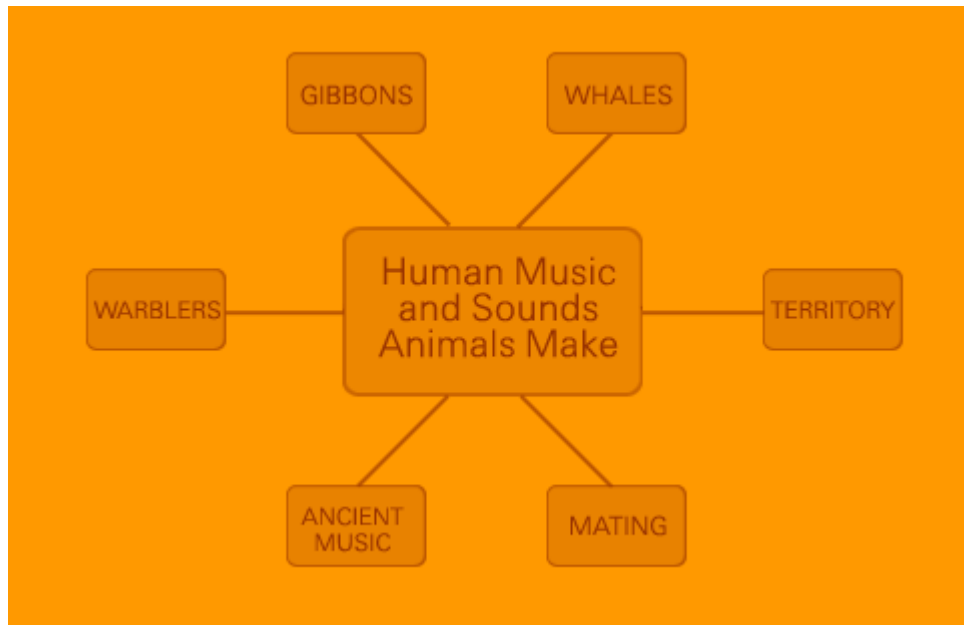
The purpose of this activity is for students to develop a graphic display highlighting the key arguments and evidence presented in the film.

Teacher Note: A concept map is a visual graphic used to display complex ideas and relationships among concepts.

1. As a class, make a concept map illustrating the key argument that David Attenborough makes in the film.

(i.e., that there is a connection between the sounds that human beings make and the apparently musical sounds that animals make).

The following is an example of what the initial stages of a concept map might look like. As students gain more information, the concept map becomes more complex.



The center square contains the key idea, and the circles surrounding it contain evidence, ideas, and arguments that explain and enhance the key idea. As students gain more information from their research they may keep adding new circles and ideas, with arrows and lines to indicate the relationships among concepts.

2. Provide students with the four steps of the scientific method:

http://teacher.nsrj.rochester.edu/phy_labs/AppendixE/AppendixE.html. As you review each step, discuss it in relation to the film and the ways that the key argument is constructed.

- Observation and description of a phenomenon or group of phenomena
- Formulation of a hypothesis to explain the phenomena
- Use of the hypothesis to predict the existence of other phenomena, or to predict quantitative results of new observations
- Performance of experimental tests of the predictions by several independent experimenters at properly performed experiments

3. After completing the class concept map, divide students into small groups to conduct research on animals in the film. Give students the option to include information on other animals that also provide evidence.

Before the students begin their research, ask them to describe how they evaluate the information on particular Web sites. Record their ideas. Then visit the following Web site that describes evaluation criteria for Web pages at <http://www.ala.org/acrl/undwebev.html>. Scroll to the five criteria for evaluation, and compare students' ideas with those suggested. Create a class rubric for the best ways to evaluate Web sites.

Web sites to use for beginning research are suggested for each group.

Group One: Humpback Whales

<http://www.pbs.org/wnet/nature/humpback/song.html>

<http://dkd.net/whales/wsounds.html/A>

<http://www.pbs.org/wnet/nature/humpback/>

Group Two: Great Reed Warbler

http://www.bbc.co.uk/nature/programmes/radio/dawn_chorus/picpops/sweden.shtml
http://www.teorekol.lu.se/ekol_inst/mol_ekol/grw_homepage.htm

Group Three: Siamang Gibbon

<http://www.sazoo-aq.org/02meet/02index.html>(Under "Mammals" and then "Gibbons")
<http://www.tiho-hannover.de/gibbons/main/abstracts/papers/86matechange.html>

Activity Two

1. Have the students create a panel of experts to discuss each animal and decide whether the evidence supports the key ideas in the film. Each group should create a presentation highlighting its research.
2. After each presentation, allow time for students to ask questions.
3. As a class, discuss and evaluate the evidence presented.

Extension Activities

Activity One

1. Ask the students to work in pairs and make an audiotape of the sounds they hear in nature.
2. Combine the students' tapes into one tape. Share this tape with other students. Discuss students' reactions to the tape.

Activity Two

1. Visit the following Web site that describes solar music:
http://www.noao.edu/education/ighelio/solar_music.html.
2. Create a brief newsletter on various aspects of this topic.

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