

ACTIVITY: SAVING SPRINGER: MAKE YOUR OWN WHALE CALL

GRADE LEVEL 2-6

OBJECTIVE

Students will use balloons to create their own whale calls and will write down each call using symbols to describe it (20 minutes).

BACKGROUND

Orca calls are repeated and consistent over time. The noise is made by residual air left in the nasal cavity. Researchers are able to listen to whale vocalizations on a hydrophone and record them for further analysis. They can then use computer programs to play back the sound and visually view the sound using a spectrogram, also called a sonogram. In this activity, students will use balloons to create echolocation clicks, whistles or calls. They will transcribe the sounds in their activity books, using notations that are used by killer whale whale researchers. This activity may be done as a whole class, in pairs, or in small groups (see steps below).

MATERIALS

Balloon for each student
Optional Whale Calls activity page

PROCEDURES

1. (Optional) Show students the Whale Calls activity page or give each student a copy of the worksheet.
2. Demonstrate how to make the whale sounds with the balloons. Show how to stretch the balloon, blow it up, and then release the air at different intervals to make the sounds. Stretch the neck between your index fingers and thumbs (using both hands) as the air escapes. By stretching up with one hand and down with another, you can make different sounds.
3. Demonstrate how to make notations like in the activity page – separate vertical lines to show distinct short sounds, swooping upward or downward lines to show distinct sounds that change pitch, or a wiggly line to show a continuous line that goes up and down..
4. Then, pick from one of the following options:
 - a) You make the whale calls, and students draw the notations. You could then show them 2 notations and make one call. Have them figure out the notation for that call.
 - b) Hand out the balloons, and have students practice for 1-2 minutes. Once the students make what they think would be a good whale call, encourage them to make



the call more than once just like a whale. Then draw their notations to match. Then switch drawings with a friend and have them attempt to make that sound.

- c) Have the students break into groups; create 3 calls with notations; demonstrate one call for class and have class guess which call it is based on the group's notation for their three calls.

When finished, collect the balloons or have the students put them away.

Discuss possible reasons that whales vocalize (finding food, communicating with other whales, recognizing whales from the same family).

More information on whale calls:

Discovery of Sound in the Sea website

<http://www.dosits.org/animals/intro.htm>

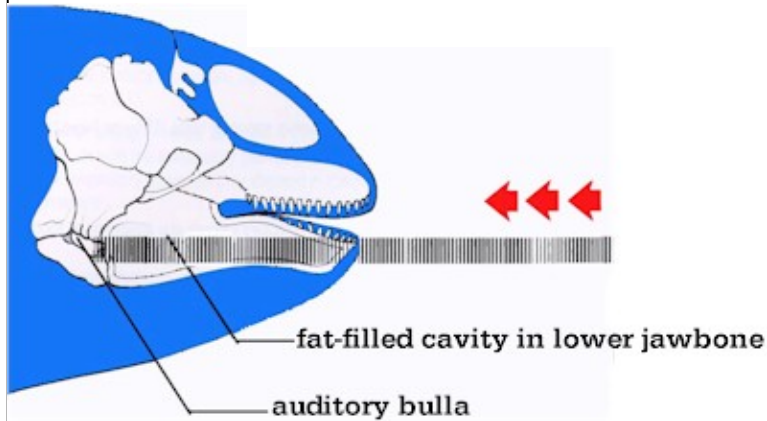
The Center for Whale Research

http://www.whaleresearch.com/audio_video.html



Whale calls

Acoustics: Killer whales produce three types of sound: echolocation clicks, whistles and calls.



Describe what these vocalizations sound like:

Echolocation click:

Whistle:

Call:

Make your own whale call

Now it's your turn! Use balloons to make your own killer whale calls, and write them down using the following notation to "draw" a sound:

Separate vertical lines to indicate distinct clicking sounds

| | | | | | | | (space between the lines can show how fast the clicks go)

Swooping upward line to indicate sound that goes up

⤴ ⤴ ⤴ (this shows three sounds that start low and go up)

Swooping downward line to indicate sound that goes down

⤵ ⤵ ⤵ (this shows three sounds that start high and go lower)

Wiggly line to indicate sound that goes up and down



Create 3 whale calls with your balloon, write them down and make the sounds to your friends!

1.

2.

3.

Have fun and describe what each sound means.