



Can You Speak Orca?

Introduction

There are thousands of different human languages. Many animals also have languages. Both humans and orcas use sounds and body language to communicate. Humans greet each other by saying hello or using body language such as a handshake or a bow. Some human cultures use "whistle" languages and some people with hearing problems use a "sign" language. Orcas from Granny's clan also greet each other. When orca pods meet up after spending some time apart, they say hello in a special way. All of the orcas from one pod form a line at the surface and face the orcas from the other pod. Slowly both groups swim towards each other. When the two groups get close together, they dive, breach and play with great energy. This **greeting ceremony** is taught to young orcas and passed down from one generation to the next.

Orcas make echolocation clicks, whistles and calls. All the orcas in Granny's clan share the same language but each family pod makes their calls with a different "accent" called a **dialect**. Young orcas learn their language and dialect by listening to the adults in their family and practicing with each other. We can listen to orca calls using a **hydrophone**, an underwater microphone that lets us eavesdrop on orca conversations. Although we don't understand their language, scientists believe that orcas use their calls to share information, coordinate their activities, identify themselves and interact with each other. Orca calls sound like squeaks, squeals, squeaky doors, chirping birds, honking horns and mewing kittens.

Key Concepts

- ◆ Language is created by assigning meaning to words or sounds.
- ◆ People and animals use languages to communicate.
- ◆ Orcas use visual and sound languages to say interact and share information.

National Science Education Standards

Life Science – Characteristics of Organisms.
Organisms and their Environments (K-4)

National Council for Teachers of English/ International Reading Association Standards:

4. Students adjust their use of spoken, written and visual language to communicate effectively with a variety of audiences and for different purposes.
5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for different purposes.
8. Students use a variety of technological and information resources to gather and synthesize information and to create and communicate knowledge.

Inquiry Questions

- ◆ What is a language? Why do people use language to communicate with each other?
- ◆ What different ways do people communicate with each other? (sign, pictograph, telegraph)
- ◆ What different ways do animals communicate with each other? (sound, scent, movement)
- ◆ How do orcas communicate with each other?
- ◆ Why do humans and animals greet each other?
- ◆ Why do you think orcas pods have different dialects?
- ◆ How are human and orca languages similar? Different?
- ◆ If you were an orca, what would you want to communicate to people?

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Activity #1-Orca Eavesdrop

In this activity, students listen to orca calls from Granny's clan recorded by hydrophones.

Procedure:

1. Listen to orca calls: <http://orcasound.net/>
2. Learn the difference between pod calls: <http://orcasound.net/soundtutor/>
3. http://www.whaleresearch.com/audio_video.html
4. <http://www.youtube.com/watch?v=s5ZSvTfYYJQ>

Discuss: What do you think the orcas are communicating to each other?
Do you think it would be difficult to learn the language of orcas?

Activity #2 -Greetings!

In this activity, students greet each other in a variety of different languages.

Procedure:

Hello! Greetings!

1. On blank cards, copy each HELLO! word and its origin (language name, country or tribe) from the HELLO! Language List. Distribute a HELLO! card to each student.
2. Ask one student at a time to present a HELLO! word to the class. Ask the other students to guess its origin.

Orca Greetings

1. Imagine you are an orca in Granny's clan. Each pod (J, K and L) has been traveling separately for several weeks as they hunt for salmon. Now all three pods are coming together to greet each other.
2. Assign students to three groups: J pod, K pod or L pod and give each an ID card that identifies their pod. Tell students they will role-play the orca greeting ceremony.
3. Ask members of each pod to gather together as a group. Students practice saying their pod dialect.
J pod = chirp-chirp K pod = mew-mew L pod = eek-eek
4. Members of J pod line up facing members of K pod. Both pods walk towards each other in a line. When they get close, J pod and K pod greet each other with their pod dialect. Then they greet each other with a human handshake.
5. J pod and K pod mix together and line up to face L pod.
6. L pod lines up and the two groups approach each other. When close, they greet each other with pod dialect. Then greet each other with a human handshake.

Discuss: How are orca greetings like human greetings? Different?
How did you feel greeting others as an orca? As a human?

Activity #3 -Create Orca Times newspaper

In this activity, students imagine that Granny's clan and the other animals of the Salish Sea publish their own newspaper. Help them design and write this week's edition.

Procedure:

1. Students create **Orca Times** newspaper. Design a banner. Create artwork. Find photos.
2. Write stories (News, Interviews, Sports, Weather, Interviews, Letters to the editor, Social Events, Advertisements for products animals might use).
3. Divide students into 6 teams, each with a different newspaper story assignment.
4. When stories are completed, assemble newspaper on classroom wall using butcher paper or create on computer.

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Hello! In Many Languages

HELLO!	Language	Pronunciation
Bonjour	French	
Ni hao	Chinese	
Hola	Spanish	
Oh see yoh	Cherokee	
Al salaam a'alaykum	Arabic	
Preevyet	Russian	
Namasthe	Hindi	
Guten Tag	German	
Konnichiwa	Japanese	
Salam	Persian	
Dakota	Sioux	
Aloha	Hawaiian	
Dobre rano	Czech	
Anyo	Korea	
Ciao	Italian	
Kalxti	Na'vi (Avatar)	(kal-t-i)
Shalom	Hebrew	
Jia Ora	Maori (New Zealand)	
Dia Dhuit	Gaelic (Irish)	
Jambo	Swahili	
Ya'at'eeh	Navaho	
Yasas	Greek	
NuqneH?	Klingon (Star Trek)	(nook-neck)
An nyeong	Korean	
Hand sign	American Sign Language	Salute from forehead – with thumb tucked