

MASKING Activity Instructions

Activity summary: This activity is meant to illustrate first-hand how increasing background noise levels can affect an animal's ability to communicate, i.e. masking occurs.

Learning outcomes:

- Understand the concept of masking.

Resources:

Discovery of Sound in the Sea Website – <https://dosits.org/>

“Masking in Marine Mammals | CREEM” video – <https://youtu.be/WT4OtD4g4KI>

Number of participants required: Minimum of 10.

Materials needed:

- Print outs of the nursery rhymes (see Attachments).

How to run the activity:

Before the activity begins, it's important to provide some context on the subject. This can be done by having a short conversation with the class, or by watching the 3-minute video available on CREEM's website about masking (see “**Resources**”).

To set up the activity, begin by asking two young learners to stand on opposite sides of the room and have the remainder of the group sit between the standing two. After everyone is in their positions, ask one of the standing participants to ask the other a question, while the group in between remains silent. Importantly, these can't be a yes/ no question, as the answer can be easily communicated by shake or nod of the head. Examples of questions to ask could be “What is your favourite ice cream flavour?” and “What is your favourite animal?” (see Attachments for more examples). The goal with this first step is to show how easily they can hear each other if there is no background noise.

Then, have the standing participants ask each other another question. This time, however, have the participants in the middle begin reading out loud the different nursery

rhymes at a low volume. With every new question, ask them to read louder and louder until they reach a point where the participants standing opposite in the classroom are unable to hear each other.

By doing this, you'll have shown the group first-hand how loud background noise can affect communication, which is one of the ways masking affects marine mammals. To solidify this new knowledge, you can start a discussion by covering questions such as:

- Why did the message get harder to send and receive?
- What animals might be affected by this (marine and terrestrial) and in what ways (e.g., what messages might they want to send/ receive)?
- How light and sound travel differently in air and water. Therefore, the importance of sound to animals living in different marine and terrestrial environments can be different too.
- What are possible noise sources in different environments?

Nursery rhymes examples

Pat a cake, Pat a cake, baker's man
Bake me a cake as fast as you can;
Pat it and prick it and mark it with a 'B',
And put it in the oven for Baby and me.

Seesaw Margery Daw
Johnny shall have a new master
He shall earn but a penny a day
Because he can't work any faster

Humpty Dumpty sat on a wall,
Humpty Dumpty had a great fall.
All the King's horses,
And all the King's men
Couldn't put Humpty together again!

Jack and Jill went up the hill to fetch a pail of water
Jack fell down and broke his crown
And Jill came tumbling after.
Up got Jack, and home did trot
As fast as he could caper
He went to bed and bound his head
With vinegar and brown paper.

One, two, three, four, five.
Once I caught a fish alive,
Six, seven, eight, nine, ten,
Then I let it go again.
Why did you let it go?
Because it bit my finger so.
Which finger did it bite?
This little finger on the right.

One two buckle my shoe
Three, four, knock at the door
Five, six, pick up sticks
Seven, eight, lay them straight
Nine, ten, a big fat hen
Eleven, twelve, dig and delve
Thirteen, fourteen, maids a-courting
Fifteen, sixteen, maids in the kitchen
Seventeen, eighteen, maids in waiting
Nineteen, twenty, my plate's empty.

What is your favourite colour?

What is the name of your street?

What is your favourite animal?

What is your favourite ice cream flavour?

What is your favourite movie?