### STREAM TO SEA LESSON PLAN



### Compose A Stream Song

An activity that familiarizes students with a streamside environment and encourages them to express themselves through song.

### Music 6 Prescribed Learning Outcome(s) met and Curriculum Organizer(s)

It is expected that students will:

Curriculum Organizer: Thoughts, Images And Feelings

- Use the elements of rhythm, melody, and expression to interpret a range of thoughts, images, and feelings in performance repertoire
- Apply the elements of expression in their compositions

Curriculum Organizer: Context (Self And Community)

- Apply skills and attitudes appropriate to a range of music experiences, demonstrating:
- audience and performance etiquette
- performance skills
- respect for the contributions of others
- Demonstrate responsibility to themselves and the group while experiencing music
- Use established criteria to analyze the work of self and others
- Identify personal and career opportunities in music

Curriculum Organizer: Context (Historical And Cultural)

- Compare music from a range of historical and cultural contexts
- Identify a variety of purposes for creating music
- Create music for a given purpose
- Demonstrate respect for music from various historical and cultural contexts

### Overview of Activity:

In this activity students visit a stream and are inspired to compose their own song. By listening to a CD of fellow students from the Greater Victoria area who worked with singer/songwriter Holly Arntzen, they learn that they, too, can create music! The first step in their song-writing journey is a field-trip to a river or stream. They describe the place they visited by keeping a nature journal, storytelling or by making a map. The field-trip is followed by as much follow-up research and study on the riparian (streamside) or in-stream environment as time allows. When the students know the place, they compose a song either individually or as a class.

### Estimate of time required:

Number of lessons:	4-6 lessons
Each lesson requires:	30-45 minutes
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Can be done: Anytime Winter □ Spring 

Notes: One half-day field trip and up to 4 40-minute classes

Ocean OR Stream OR Estuary Natural Area Required: Aquatic Environment

### Overview of Materials and Resources Required:

Material Available for downloading:

Activity Description(s)

"What To Look For / Rules For Salmon Habitat Study"

### STREAM TO SEA LESSON PLAN



- "Compose A Song / Describing Your Favourite Place" Student Handout(s)
- "Rules For Salmonid Habitat Study (Handout 11.1)"
- "Salmon Habitat Study No. 1 (Handout 11.3)"
- "Salmon Habitat Study No. 2 (Handout 11.4)"

⊠Background Information

- "Salmon Habitat Study"
- "Making Music Introduction"
- Discussion Questions
- (Not available)
- Evaluation/Assessment Tool(s)
- (Not available)

### Other Required or Suggested Material:

- Music CD: "Salish Sea Holly Arntzen and the Saltwater Singers" in "Salish Sea: A Handbook for Educators" (2001). Fisheries and Oceans Canada and Parks Canada.
- "Salmonids in the Classroom Primary" (2002). Fisheries and Oceans Canada.
- "Salmonids in the Classroom Intermediate" (2002). Fisheries and Oceans Canada. Chapter 3: Salmon Habitat On-site Studies.

### Suggested Assessment Activities:

(Not available)

### Recommended Additional Resources and Optional Enrichment Activities:

(E.g. Web-sites, Teaching Guides, Student Reading, Videos/Audio-tapes, Posters and Brochures, Field Trips:

- "The Streamkeepers Handbook: A Practical Guide to Stream and Wetland Care". http://www.pskf.ca/publications/handbook.html
- "Into the Field: A Guide to Locally Focused Teaching" (Nature Literacy Series Vol. 3) (2005) Clare Walker Leslie, John Tallmadge, Tom Wessels. Orion Society. ISBN: 0913098523
- "Nature Journaling: Learning to Observe and Connect with the World Around You" (1998) Clare Walker Leslie. Storey Publishing, LLC. ISBN: 1580170889
- "Green Teacher: Education for Planet Earth" magazine. http://www.greenteacher.com

### Support may be Available.

Contact your local Stream to Sea Education Coordinator or Community Advisor. www-heb.pac.dfo-mpo.gc.ca/community/contacts/ec\_e.htm

or phone (604) 666-6614 to find out if an Education Coordinator in your area assists with this activity.

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# WHATTO

### **Materials:**

- ▶ Copies of "Handout 11.3: Salmon Habitat Study No. 1" for each student
- ▶ Copies of "Handout 11.4: Salmon Habitat Study No. 2" for each student
- Writing supplies
- Chart paper

### Time required:

One lesson, plus follow-up time after the field trip

### Level of conceptual difficulty: Simple

### Suggestions for assessment:

Review student handouts and monitor in-class discussion to ensure that the students can observe and describe a variety of phenomena from nature.

### INTRODUCTION

- Shortly before the field trip (earlier in the day if feasible), have small groups of students use "Handout 11.3: Salmon Habitat Study No. 1" to list things they think they will see.
- Have the groups report their lists to the class and make a class list on a chart.
- Have the class divide the list into items from nature and items from humans.

### RESEARCH/DISCUSSION

- Give the students copies of "Handout 11.4: Salmon Habitat Study No. 2" and have them use it on the field trip to write or draw their observations. Stop several times during the field trip and have students record their observations on the handout.
- Following the field trip, have students read their notes or describe their observations to the class.

### **SUMMATION**

- Discuss with the class similarities and differences between their observations and the list of what they expected to see. If necessary, prompt them with questions, such as:
  - What did you observe that you did not think of before the field trip?
  - What were you expecting that you did not observe?
  - What did you think would be most interesting and what turned out to be most interesting?
  - Did you see more or less items from humans than you expected?
  - Why were there differences between what you expected and what you observed?







These activities make a valuable extension to the units on the egg, alevin and fry, especially if your school has a classroom egg incubation tank and will be releasing the fry into a local stream.

#### **Materials:**

▶ Copies of "Handout 11.1: Rules for Salmon Habitat Study" for each student

### Time required:

One lesson

### Level of conceptual difficulty: Simple

### Suggestions for assessment:

Monitor pairs and class discussion to ensure that the students can explain all the rules.

### ADVANCE PREPARATION

Review any rules your school has regarding student safety around water and ensure that adequate precautions are in place. Some streams and lakes may be hazardous for young children, particularly if there are strong currents, slippery rocks or unstable banks.

- If possible, tell the students that you have selected a variety of sites for a salmon habitat study and ask them to choose the site they would prefer to visit.
- Select an appropriate location for your class, then confirm transportation and any booking necessary for the site. If possible, choose a site within walking distance from your school so that students can relate the field trip to their own life experience and can visit with their family outside of class hours.
- Arrange adequate supervision from parent helpers or other volunteers. Most sites cannot provide supervision, although those with school programs can provide information and activities when informed in advance. If there is an on-site program, check what it offers and how to prepare the class.
- Walk the site before the class visit to check for appropriateness, safety and educational opportunities.
- Prepare the handouts and other materials students will need. Arrange permissions, as required by your school. Advise students to bring warm clothing, waterproof boots, a snack and a backpack.

### RESEARCH/DISCUSSION

- Shortly before the visit, give students a copy of "Handout 11.1: Rules for Salmon Habitat Study". Have students, in pairs, read the handout and explain to each other any rules they do not understand.
- Have each pair tell another pair what one rule means. Repeat the procedure for all rules.
- Ask the class if there are any rules they want to add or remove from the list and have students write out any changes.





### Compose A Song

### Selected learning outcomes K-3:

 demonstrate an awareness of historical and cultural contexts of music

### Selected learning outcomes 4-7:

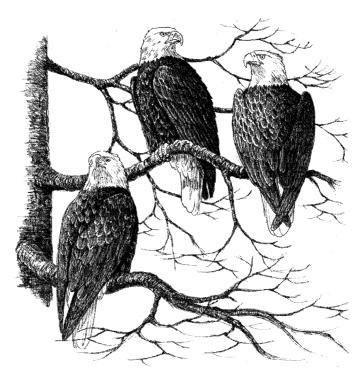
- apply skills and attitudes appropriate to a variety of roles, demonstrating;
  - audience and performance etiquette
  - performance skills
  - respect for the contributions of others
- demonstrate the ability to provide and accept constructive feedback

Brainstorm, with the children, responses to the following:

- Identify occasions and reasons for people to sing (e.g. birthdays, bedtime, celebrations and ceremonies, religious observances, to express emotions, as an occupation).
- Name songs people sing at these specific times, or for particular reasons. Sing them.
- As a class, write new lyrics for *Twinkle Twinkle Little Star* which reflect children's understanding of marine organisms and the web of life.

### Collaborative Songwriting

Students work in pairs. One develops a new question to "ask the boatman"; the other gives an answer. Switch roles and repeat. Together create alternate lyrics for the rest of the first verse. Record these ideas. Some more musically adept individuals may even make their new lyrics fit the music. Those who love to sing can perform compositions for the rest of the group.



**Bald Eagles** 





### Science K-3 Selected learning outcomes:

- describe the characteristics of a variety of plants
- describe the appearance and behavior of a variety of animals

### Science 4-7 Selected learning outcomes:

- identify living resources in the local environment
- describe how humans use B.C.'s living resources

### Describing your Favourite Place

### Primary:

- Read Holly's story about *Boat Ashore* (p. 4) and Abner Thorne's story of his childhood on the Salish Sea (p. 51).
- Have children describe and draw their favourite local place.
- Encourage the description of specific places, animals and plants rather than just 'beach', 'bird' or 'flower'. For example, 90% of the gulls that you'll see on or near the Salish Sea during the summer are Glaucous-winged Gulls, because those are the only ones that breed in this area. For ideas use pictures from this handbook.

### Keeping A Nature Journal

### Intermediate:

A nature journal can be used to record the history of a place or person. It is first-hand research. With journals in their hands, students pay better attention to the world around them and their feelings towards it. Famous naturalists, from Charles Darwin to Robert Bateman, have kept journals.

- Keep journals on a regular basis with entries from experiences in schoolyards, family walks along the beach, field trips, holidays.
- Encourage children to experiment, take chances and be honest in their writing. Note observations and feelings and make drawings of what they see.
- Journals can also include found objects.

There are three typical types of journal entries:

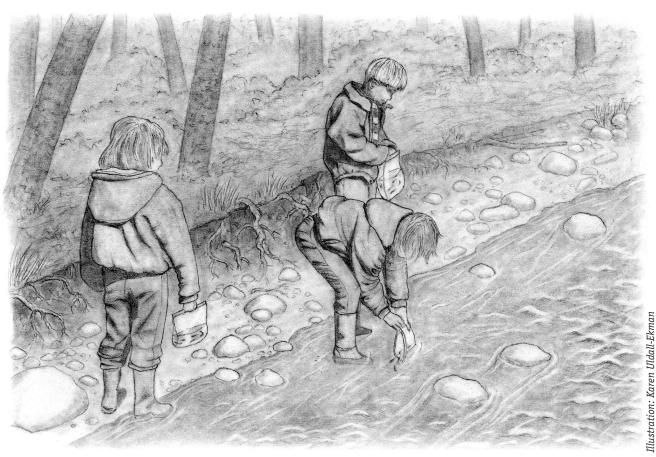
- A. Free writing in a natural setting. Give children time to write what they see and are thinking about.
- B. Suggested entries. Use this technique to focus the students on their favourite place. Use prompts such as: What is your favourite place and why? What would you show someone if you took them on a walk through this place? How is your mood affected by this place? What animals and plants do you share this place with? What are the patterns and rhythms of the place? What kind of places do you dislike? Why? Imagine being in this place a whole year.
- C. Assigned entries. Any of the above prompts can become an assigned question, providing one way to evaluate learning. It is also helpful for discussion if everyone has been given the same question.

The overall goal is to help students become lifelong observers and journal writers. Achieving the balance between instruction and leaving students to observe and reflect is critical.



**HANDOUT 11.1** 

# RULES FOR SALMONID HABITAT STUDY



- 1. Follow directions.
- 2. Stay in your groups.
- 3. Walk only. Do not run.
- 4. Play only where allowed.
- Other rules:

- 5. Stay on the paths.
- 6. Do not pick plants.
- 7. Do not disturb fish or other animals.
- 8. Take your things with you when you leave.



**HANDOUT 11.3** 

# SALMON HABITAT STUDY NO. 1

On the salmon habitat study, I think

I WILL SEE	
I WILL HEAR	
I WILL TOUCH	
I WILL SMELL	



**HANDOUT 11.4** 

# SALMON HABITAT STUDY

NO. 2

On the salmon habitat study, I think

I CAN SEE		
I CAN HEAR		
I CAN TOUCH		
I CAN SMELL		

# Stream Intermedia

### **BACKGROUND INFORMATION**

# SALMON HABITAT STUDY

Small streams and lakes produce most of the West Coast's fish, including six salmon species and over 80 species of freshwater fish. Salmon all spawn in shallow water, and many species spend a year or more in the stream or lake after they hatch. Salmon habitat is easily damaged by logging and mining activities, by urban and industrial construction, and by pollution. Many of these practices are changing to protect streams and revitalize streams that have been damaged in the past.

Water. At every stage in their life, salmon need clean water that is between 5°C and 10°C and which contains oxygen. A healthy salmon stream has a mix of fast running water and deep pools. Fast running water washes over rocks in riffles and picks up oxygen. Deep pools that form at the edge of a stream and in the water behind rocks, logs or other debris allow salmon to rest from the current and hide from predators. Cloudy water contains silt and mud that can smother eggs and irritate the gills of young salmon. Cloudy water also makes it harder for salmon fry to find and catch food.

Young salmon are very sensitive to pollutants in the water. Household chemicals like bleach, soap, oil or paint can be fatal if people dump them into a stream. Many pollutants enter streams through storm sewers, which carry rainwater from paved streets to nearby streams. Pollutants dumped down storm drains can kill salmon and wildlife in nearby streams.

Stream banks and lakeshores. The gravel bottom of a salmon stream or lake contains a mix of rock sizes. Salmon need gravel to spawn, but once the alevin emerge, the presence of pools and riffles is more important. The slope and curves in the streambed are important to control the flow of water and reduce flooding during storms.

Stream banks lined with plants soak up water during heavy rain and release it slowly into the stream. Marshes and similar wetlands also absorb rainfall to prevent flooding and reduce the chance of streams and lakes drying out in hot weather. Bushes and trees growing along the banks of a stream create shade and keep the water cool in the summer, keep the banks stable and allow salmon to hide in the shadows. Insects live in the vegetation along the banks and fall into the water as food for salmon. To protect the stream banks, laws prohibit construction or logging near the streams.

**Food.** Salmon fry catch tiny insects that float past them. As they grow, the salmon can catch larger insects and caterpillars that fall into the stream or lake, as well as mayflies and stoneflies that land on the water to lay their eggs. When they are large enough, the salmon can eat smaller fish in the stream or lake.

**People.** People disturb streams and lakeshores and their natural residents when they remove the vegetation, divert the water flow, pollute the water or build docks. People can erode the banks by playing or driving along the edges of a stream or lake. They can crush salmon eggs in the gravel or expose them at a very sensitive stage. People and pets sometimes harass spawning salmon in shallow streams or leave garbage at the site.

But people can also protect and restore streams and lakes. Many groups and individuals act as streamkeepers, conducting stream inventories and monitoring environmental health, working for the streams' protection, replanting and restoring streams that have been damaged or buried in culverts. People should be conscious that they share the stream with others and that every organism contributes to the health of the ecosystem.





# Part One: Making Music

### Introduction

It's a thrill to be part of making a beautiful group sound. The idea here is to make every music lesson like a concert...mostly music, just a little discussion...and to move smoothly from one activity to the next. The most important activity for learning the songs is to sing along with the CD, while reading lyrics displayed by an overhead projector.

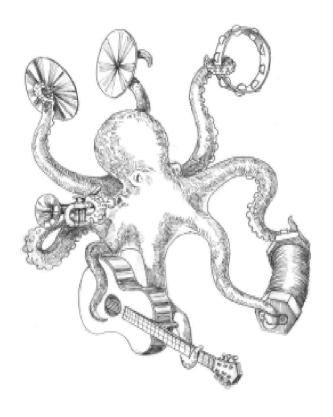
Desirable elements to include in your music lessons are listening, singing, rhythm and movement. If possible, build up to including all elements each time you sing together. Outcomes include becoming more active listeners and confident singers, acquiring a vocabulary of rhythms and ways to apply them, learning a repertoire of songs, and movement to music.

In Part One, songs are presented in the order they appear on the CD. Each song has one or more activities, and these progress in a learning sequence. Once learned, an activity can be used with more than one song.

### **Music Progression**

If you want to start with songs that are musically the easiest to learn, here they are in order from easy to difficult:

- 11. Row Row Your Boat
- Forget & Forgive
- 8. Seal's Lullaby
- 3. Salish Sea
- 2. Saltwater
- 7. Boat Ashore
- 4. Blue Planet
- 6. Free in the Harbour
- 9. Drawn to the Rhythm
- 1. Ask the Boatman
- 10. Those Who Fell From the Sky



# Stream Intermediate

## Singing

### Teaching a New Song

- Read my background story (Notes from Holly) aloud to students.
- Play the song from the CD. Children listen.
- Display the lyrics (if appropriate). Pronounce difficult words.
- Play the song again. Sing along.
- Repeat.

### When children have learned more than one song

- Sing a review song along with the CD.
- Introduce a new song as above.
- Do a rhythmic activity.
- Sing another review song.
- Do a movement activity (optional).
- Review other songs.



Pigeon Guillemot (Look for them at ferry terminals)

### Rhythms: A Vocabulary

#### **RHYTHM**

1 1 1 1 Fee Fie Fo Fum

1–1 1–1 1—1 1—1 Lucy locket lost her pocket

1 & 1 & Keep calm

1 1 1 & Watch your step!

1–1 1 1–1 1 Talk is cheap, talk is cheap

1—1 1—1 1–1 1 All that glitters is not gold

#### NOTES

1 = is called a stem – a pulse beat, the sound your feet make when you walk or march.

1–1 = two stems joined by a beam is the sound your feet make when you run.

& = rest for one beat. No sound. If moving, don't step during the rest.

I I I & = Three steps, then pause for one beat.



### Rhythm: Activities

### **Speech Patterns**

- Introduce the rhythm with the speech pattern
- Teacher says, "Listen and echo."
- Teacher says, "Fee fie foe fum." Children echo it. No pause.
- Vary the dynamics loud, soft, very loud.
   Children copy.
- Keep a steady rhythm. No pause between call and response.

### Follow the Leader

- Children are seated in a circle.
- Teacher says, "Follow the leader. Do as I do."
- Teacher claps a rhythm over and over again.
   Children clap along.
- Teacher switches to patting thighs. Children copy.
- Teacher snaps the rhythm with fingers.
   Children copy.
- When children have learned more than one rhythm, the teacher can shift from one to the other.

### **Echo**

- Teacher claps a rhythm, children echo.
- Teacher claps a different rhythm, children echo
- Call and response rhythms flow without pauses.
- Vary the dynamics—loud, soft, etc.
- Vary the body sound—clap, pat, snap, cluck, stamp.
- Distribute rhythm sticks—one pair per child, and play "Echo."

### **Rhythm Ostinato**

- •Ostinato = continuously repeated rhythm.
- Play part of one song from CD.
- Teacher and children accompany it with a body sound rhythm.
- "Fee fie foe fum" will work with any of the songs.
- Play the song again using a different rhythm.
- Repeat using rhythm sticks.
- Have most children sing with the CD and a small competent group accompany with available percussion instruments.

### **Basic Movement**

- Children stand.
- Teacher plays an ostinato on a hand drum.
- Children move about in available space making their feet "say" the rhythm the teacher plays.
- Vary the dynamics—loud, soft, etc.
- Walk heavily for loud beats; tip toe for soft beats.
- Switch without stopping to other rhythms.
- Agree on some musical sound as a signal for all to sit in a circl again—e.g. a tambourine shake.

### **Interpretive Movement**

- Play part of a song from the CD.
- Notice the characteristics of the music:
  - Is it slow, fast?
  - Is it dreamy or vigourous?
- Have the children move freely in the space available to them in appropriate ways. Small actions for soft, slow music, larger actions for more vigourous music.

### Some survival rules:

- Avoid touching or bumping people or things.
- Move safely.
- Listen to the music.
- Listen and move the way the music tells you to move.

# Stream Intermediate

### ASK THE BOATMAN

### **Notes from Holly**

I spent a couple of years living near the Arran Rapids on Stuart Island, at the mouth of Bute Inlet. In the winter, hurricane-force winds of cold arctic air sometimes funnel down Bute Inlet and blow so strong you can't stand up. In this part of the west coast ocean tides flush through narrow channels, causing currents that can reach over 26 kilometres per hour. The Arran Rapids are like a fast-flowing river that changes directions. Its huge standing waves and overfalls, massive boils of seawater, and 30-40 foot whirlpools have capsized many a boat. All this action brings up herring and hake—food for salmon, cod, seals and sea lions. In the spring dozens of bald eagles gather to feed on the abundant sea life; black bears roam the beaches grazing on barnacles, crabs and shellfish.

The first day I arrived at the Rapids was August 20, 1996... my 43rd birthday. An eagle flew overhead and one of its long white tail feathers dropped on the road. Stephen, my husband, picked it up and gave it to me saying, "Happy Birthday." A year later, Stephen was investigating a cougar's den in the forest by the rapids. At the den's entrance he found a second white eagle feather which he also gave to me. First Nations people regard eagle feathers as sacred. They bring a responsibility to bear witness and communicate what you see.

The day we left Arran Point we asked the water taxi skipper to take us one last time through the rapids. I will always remember seeing the white heads of more than 100 bald eagles amongst the dark green trees along the shore.

#### **ASKTHEBOATMAN**

Holly Arntzen / Stephen Foster

### Verse 1:

Ask the boatman, "Is it true?
One hundred eagles were on view
On the day we left paradise."
Ask the boatman, did he see
On the mossy rocks and
In branches of the trees
White heads shining like candlelight?

#### Chorus

Two white feathers in my hand
Bear witness to this changing land
Will I ever understand?
No matter how much
you want to slow things down
That moon just keeps
moving through the sky
And the world keeps
spinning round and round
Sun follows moon,
and the days fly by...the days fly by

#### Verse 2:

Ask the boatman, did he see? What was happening in the sea On the day we left paradise? Ask the boatman, does he know What direction we should go?

REPEATCHORUS



