

Activity 9: Salmon and Steelhead Life Stories Web Search

[Overview](#)

[Background Information](#)

[Objectives](#)

[Time](#)

[Materials](#)

[Advance Preparation](#)

[Setting the Stage](#)

[Conducting the Activity](#)

[Wrap-Up](#)

[Enrichment](#)

[Assessment](#)

Overview

In this activity, participants conduct an Internet investigation to learn about the natural history of local salmon and/or steelhead. They then write a story that describes the life of a salmon or steelhead from the local creek, including a description of each stage of its life cycle and what people can do to help salmon and steelhead. Participants will build on this information in the activities that follow as they design appropriate habitats for salmon eggs and plan for habitat monitoring.



Background Information

For information about the salmon and steelhead life cycle, see the [Background Information in the Unit Overview](#) and the links on the “Salmon and Steelhead Life Stories Web Search” worksheet.

Objectives

Participants will: (1) conduct an Internet search to learn about the life cycle stages and migration patterns of local salmon and steelhead species, and (2) write a story that describes the life of one salmon or steelhead fish that hatches in the local creek, including what it looks like, what it needs, where it is on its journey, and any challenges it faces at each life cycle stage. They conclude the story by suggesting ways people can help salmon and steelhead.

Time

Activity: Four to five group sessions

Materials

- Access to Internet
- Map of California that includes local creek area*
- Student notebooks or writing paper
- Colored pencils or pens (optional)
- Glue sticks (optional)
- [“Salmon and Steelhead Life Stories Web Search”](#) worksheet (hard copies optional)
- Copies of the “Salmon and Steelhead Life Cycle” worksheet, 1 per person
- Sample life-cycle stories for participants to read (see Children’s Literature under [Resources: Stories and Music](#))*
- Copies of Rubric for Salmon and Steelhead Life Stories, 1 per person (optional)
- KWLR chart (started in [Activity 1: Getting to Know Salmon and Steelhead](#))

* = Included in Adopt-A-Watershed Kit

Advance Preparation

1. Plan your schedule so that each participant can spend two (or more) group sessions on the web search and another one or two group sessions writing the story.
2. Arrange computer lab time as necessary.
3. Collect two or more salmon life-cycle stories for participants to read as examples. Try to choose ones that are different in writing style and plot for students to compare.
4. Read over the participant pages to familiarize yourself with the task.
5. Make copies of: the “Salmon and Steelhead Life Cycle” worksheet, the “Salmon and Steelhead Life Stories Web Search” pages (if you want participants to have a hard copy), and the Rubric for Salmon and Steelhead Life Stories (if you will be using it).

6. Invite your salmon and steelhead resource professional (see [Resource Professionals](#) under [Unit Overview: Tips for Managing the Unit](#)) to join the group for the Wrap-Up to hear participants read their stories. Ask him or her to talk with participants about the specific life cycle and migration patterns of local salmon and/or steelhead. For example, he or she might explain whether there are different spawning runs during the year in your area, how long these fish typically spend in the ocean before heading back upstream, where they tend to end up in the Pacific Ocean, who is studying salmon and/or steelhead in your area, what they are trying to learn to restore salmon and/or steelhead populations, and so on.
7. Post the map of California on the wall.

Setting the Stage

1. Ask participants what a life cycle is and have them name some stages of the human life cycle (for example, fetus, newborn, infant, and so on). For a couple of the stages ask, “How is a person in this stage different from one in the stage before or after? What do people need at this stage to thrive? (For example, toothless infants need food that they can swallow without chewing.) Is it possible to go to the next stage of the life cycle without going through this stage?”
2. Reminding participants of [Activity 2: The Incredible Journey](#), ask them what life cycle stages salmon and steelhead go through in their migration (do not be concerned about accurate names at this point). Ask participants to name the stage(s) that might occur in the local creek and that occur in the ocean.
3. Looking at a map of California, have participants trace the path that salmon and/or steelhead would need to go from your local creek to the ocean and then back again. Make a list of the bodies of water it would pass through on its journey.
4. Explain to participants that they will do a web search to learn more about the life cycle of salmon and steelhead and what salmon and steelhead need at different times and places in their lives. Point out that this web search will help them determine whether the local creek is a good place for salmon and steelhead to live.
5. Explain that as in the previous web search ([Activity 7: Watershed Web Search](#)), they will look at a number of different web sites to find answers to questions about salmon and steelhead. For this activity, participants will use their notes to write a story about a salmon or steelhead that comes from your local creek. The story must include all the different stages of the salmon’s life cycle and include illustrations of the different stages. At the end they should suggest ways people might help their salmon or steelhead.
6. Point out that the life stories are slightly different for each salmon and steelhead species. Whenever possible, participants should include in their stories the information that is specific to the native species in your area. Ask participants to name the species of salmon

and/or steelhead that are native to your area (see [Activity 5: Salmon and Steelhead Creek Walk](#)).

Conducting the Activity

1. As a group, read over copies of the “Salmon and Steelhead Life Stories Web Search” worksheet, or have participants look at them on their computers. Make sure they understand their task.
2. (Optional) Give participants copies of the Rubric for Salmon and Steelhead Life Stories if you will be using it. Read over it together and clarify any questions they might have about the criteria.
3. Get participants set up on the computers to do their web search. Give each participant a copy of the “Salmon and Steelhead Life Cycle” worksheet for writing notes.
4. As participants work, circulate among them and help them focus on the information they need to answer the questions. Encourage them to answer the questions as completely as possible and to take notes in their own words.
5. Many of the web sites have links to other sites with relevant information. As time allows, you may want to encourage participants to expand their search to explore related topics on salmon and steelhead life cycles and migration.
6. When participants have finished answering the questions, have them read two or more stories about salmon and steelhead that you have collected (see [Advance Preparation](#)).
7. As a group, compare the writing styles, character development, setting, plot, and literary devices used in the different stories. Ask:
 - How do the characters’ qualities affect the plot?
 - What influence does the setting have on the problem and resolution?
 - What effect do literary devices (such as symbolism, imagery, and metaphor) have on the story?
8. Have participants begin drafting their stories using paper and pencil or word processing software. You may need to help them print or download pictures of each life stage.
9. Allow time for participants to create a first draft of their story and then to revise it into a final draft.

Wrap-Up

1. Have participants read aloud their salmon or steelhead life stories to an audience including the group and your salmon and steelhead resource professional. Afterward, have the resource professional talk with participants about specific life cycle and

migration patterns of the local salmon and/or steelhead (see [Advance Preparation](#)).

2. Have participants place their stories in their team portfolios.
3. Have participants look at the KWLR chart. Have them think about the guiding question: How do people affect salmon and steelhead, and how do salmon and steelhead affect people? Ask whether there is anything they could add to or adjust on the chart given what they have learned about the salmon and steelhead life cycles.

Enrichment

- Arrange for participants to share their stories with a group of younger children.
- Challenge participants to create an imaginary animal species. They should think about what the species looks like, how it behaves, where it lives, and what it needs at each stage of its life. Have participants write a complete natural history of their imagined species.
- Find out about state, federal, and international laws and treaties that protect migratory salmon and steelhead or other migratory species (see [Laws Protecting Salmon and Steelhead](#) under [Resources: Information About Salmon and Steelhead](#)).

Assessment

Use the rubric provided to assess, or have participants self-assess, their stories.

Rubric for Salmon and Steelhead Life Stories

	Excellent	Acceptable	Unsatisfactory
Content	<ul style="list-style-type: none"> The story included all of the required content (description of salmon or steelhead at each stage, including pictures, needs, threats, and what people can to help). The information was well organized and integrated well into the story. 	<ul style="list-style-type: none"> The story included most of the required content. The information was organized and was included as part of the story. 	<ul style="list-style-type: none"> Some or all of the required content was missing. The information was not organized or was not included as part of the story.
Use of Literary Devices	<ul style="list-style-type: none"> The story used several different literary devices such as conflict and resolution; metaphor; imagery; and symbolism. The story showed a clear relationship between the setting and the conflict or problem. The story clearly showed how the qualities of the character affected the plot and resolution of the story. 	<ul style="list-style-type: none"> The story used one or two different literary devices. The story showed a relationship between the setting and the conflict or problem. The story showed how the qualities of the character affected the plot and resolution of the story. 	<ul style="list-style-type: none"> The story did not use any literary devices. The story did not show a relationship between the setting and the conflict or problem. The story did not show how the qualities of the character affected the plot and resolution of the story.
Grammar/ Mechanics	<ul style="list-style-type: none"> No errors. 	<ul style="list-style-type: none"> Contained only minor errors that did not interfere with understanding of the story. 	<ul style="list-style-type: none"> Contained significant errors that interfered with understanding of the story.

Salmon and Steelhead Life Stories Web Search Worksheet

Introduction

Imagine what your life would be like if you were a salmon or steelhead! Starting out as an egg in a creek bed, you hatch and grow and make your way hundreds of miles to the open ocean and then back again.

By studying the life cycle and migration of salmon and/or steelhead in your area, you will learn:

- How salmon and steelhead change at different stages of their lives
- Where they live at each stage
- What they need to survive at each stage
- What challenges they face at each stage
- What people can do to help salmon and steelhead

The Task

Your job in this web search is to learn about the life cycle and migration path of salmon and/or steelhead in your local area. As you conduct your search, you will answer a set of questions about salmon and steelhead. Then, you will use your answers to write a story about the life of a salmon or steelhead that hatches in your local creek.

The Process

1. Read over the following questions. You will be looking for answers to these questions as you visit the different web sites below.
 - What species of salmon and/or steelhead live, or used to live, in your local watershed? Choose one species to study.
 - What are the different stages of the salmon or steelhead life cycle?
 - For each stage of the salmon or steelhead life cycle:
 - What is the name of the stage?
 - What does the salmon or steelhead look like?
 - What size is it?
 - What is its habitat? Where does it live? (Describe the location in as much detail as you can. What's the name of the creek or river?)
 - What does it need to thrive?
 - What threats does it face?
 - How do people affect it?
 - What can people do to help it?
2. Use the web sites below to conduct your search. You will need to visit several different web sites to answer these questions. Take notes in your own words, using the "Salmon and Steelhead Life Cycle" worksheet.
3. Read some sample stories about salmon and steelhead with your group to compare different writing styles.

4. Use your notes to write a story about a salmon or steelhead from your local creek. Your story should include:

- A title
- A description of every life cycle stage, including:
 - What the salmon or steelhead looks like at that stage
 - Its habitat and where it is at that stage (describing the place in as much detail as you can, including the name of the creek or river)
 - What specific things it needs to survive at that stage
 - What threats or obstacles it faces at that stage
 - What people can do to help salmon and steelhead
- Literary devices such as metaphors, symbolism, or imagery (or others identified by your teacher).

Resources

Look at these web sites to help you answer the questions about salmon and steelhead life cycles.

<p>Stages of the salmon and steelhead life cycles</p>	<p>Description of the salmon life cycle (http://library.thinkquest.org/05aug/00548/species--life%20cycle.html).</p> <p>Another overview of the salmon life cycle (http://www.vanaqua.org/salmontales/english/learningcentre/lifecycle.php).</p> <p>Salmon life cycle: early stages (http://www.krisweb.com/aqualife/lifecycle_early.htm).</p> <p>For practice with salmon migration and salmon life-cycle words, try a word search. Go to 'Bubble's Glug-Glug word search' (http://www.goldseal.ca/kids/homepage.asp).</p>
<p>What salmon and steelhead eggs need</p>	<p>Find out what salmon eggs need to hatch (http://library.thinkquest.org/05aug/00548/GoodStream.html).</p> <p>Then try designing a stream that will let the most salmon eggs hatch (http://library.thinkquest.org/05aug/00548/StreamBuilder.html).</p>
<p>Migration patterns</p>	<p>Read a description of the salmon's migration (http://www.ecotrust.org/publications/natural_history.html).</p>
<p>How people affect salmon and steelhead</p>	<p>Play The Salmon Challenge Game to learn how people's everyday activities can affect water and salmon and steelhead health (http://dnr.metrokc.gov/wlr/waterres/sc.htm).</p> <p>Click on 'Caring for Sammy' to learn about things that people can do to help salmon (http://www.goldseal.ca/kids/homepage.asp).</p>

Name: _____

Salmon or Steelhead Species Being Studied: _____

Salmon and Steelhead Life Cycle

	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____
What does a salmon or steelhead look like at this stage? Draw a picture and describe.						
What size is it?						
Describe its habitat.						

	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____
What is the name of the creek, river, or ocean where it lives?						
What does it need to thrive? (For example, what are its water, oxygen, food, and temperature needs?)						
What threats or obstacles does it face?						
How do people affect it?						

	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____	Life Cycle Stage: _____
What can people do to help it?						

Salmon and Steelhead Life Stories Web Search Worksheet

Búsqueda en la red de historias de vida del salmón y de la trucha del mar (steelhead)

Introduction / Introducción

Imagine what your life would be like if you were a salmon or steelhead! Starting out as an egg in a creek bed, you hatch and grow and make your way hundreds of miles to the open ocean and then back again.

¡Imagínese como fuese su vida si usted fuera un salmón o una trucha del mar (steelhead)!

Empezar como un huevo en una cama de riachuelo, sale del huevo y crece y avanza centenares de millas al océano abierto y regresa atrás otra vez.

By studying the life cycle and migration of salmon and/or steelhead in your area, you will learn:
Al estudiar el ciclo de vida y la migración del salmón y/o de la trucha del mar en su área, Ud aprenderá:

- How salmon and steelhead change at different stages of their lives
- Where they live at each stage
- What they need to survive at each stage
- What challenges they face at each stage
- What people can do to help salmon and steelhead

- *Como el salmón y la trucha del mar cambian durante sus etapas diferentes*
- *Donde ellos viven en cada etapa*
- *Lo que ellos necesitan para sobrevivir en cada etapa*
- *Lo que desafían en cada etapa*
- *Lo que las personas pueden hacer para ayudar al salmón y a la trucha del mar*

The Task / La Tarea

Your job in this web search is to learn about the life cycle and migration path of salmon and/or steelhead in your local area. As you conduct your search, you will answer a set of questions about salmon and steelhead. Then, you will use your answers to write a story about the life of a salmon or steelhead that hatches in your local creek.

Su trabajo en esta búsqueda de la red es aprender del ciclo de vida y la migración del salmón y/o de la trucha del mar en su área local. Al realizar su búsqueda, usted contestará un conjunto de preguntas del salmón y de la trucha del mar. Entonces, usted usará sus respuestas para escribir un cuento de la vida de un salmón o una trucha del mar que sale de su huevo en su riachuelo local.

The Process / El Proceso

1. Read over the following questions. You will be looking for answers to these questions as you visit the different web sites below. / *Lea rápidamente las siguientes preguntas. Usted estará buscando las respuestas a estas preguntas mientras visita las siguientes páginas.*

- What species of salmon and/or steelhead live, or used to live, in your local watershed?
Choose one species to study.

¿Qué especie de salmón y/o trucha del mar vive, o vivió, en su cuenca local? Escoja una especie para estudiar.

- What are the different stages of the salmon or steelhead life cycle? /
¿Cuales son las etapas diferentes del ciclo de vida del salmón o de la trucha del mar?
- For each stage of the salmon or steelhead life cycle: /
Por cada etapa del ciclo de vida del salmón o de la trucha del mar:
 - What is the name of the stage? / *¿Cómo se llama la etapa?*
 - What does the salmon or steelhead look like? / *¿Qué parece el pez?*
 - What size is it? / *¿Cuál es su tamaño?*
 - What is its habitat? Where does it live? (Describe the location in as much detail as you can. What's the name of the creek or river?)
¿Cuál es su morada? ¿Donde vive? (Describe la ubicación con todo detalle posible. ¿Cómo se llama el riachuelo o el río?)
 - What does it need to thrive? / *¿Qué necesita para prosperar?*
 - What threats does it face? / *¿Qué peligros encara?*
 - How do people affect it? / *¿Cómo lo afectan las personas?*
 - What can people do to help it? / *¿Qué pueden hacer las personas para ayudarlo?*

2. Use the web sites below to conduct your search. You will need to visit several different web sites to answer these questions. Take notes in your own words, using the “Salmon and Steelhead Life Cycle” worksheet. / *Use los sitios de la red que siguen para realizar su búsqueda. Usted necesitará visitar varias páginas de la red para contestar estas preguntas. Tome notas en sus propias palabras, utilizando la hoja " El ciclo de vida del salmón y de la trucha del mar."*
3. Read some sample stories about salmon and steelhead with your group to compare different writing styles. / *Lea algunos cuentos del salmón y de la trucha del mar con su grupo, para comparar los estilos diferentes de escritura.*
4. Use your notes to write a story about a salmon or steelhead from your local creek. Your story should include: / *Utilice sus notas para escribir un cuento de un salmón o una trucha del mar de su riachuelo local. Su cuento debe incluir:*
 - A title / *Un título*
 - A description of every life cycle stage, including: /
Una descripción de cada etapa del ciclo de vida, que incluya:
 - What the salmon or steelhead looks like at that stage /
Qué parece un salmón o una trucha del mar durante esa etapa
 - Its habitat and where it is at that stage (describing the place in as much detail as you can, including the name of the creek or river) /
Su morada y donde está en esa etapa (describa el lugar en cuanto detalle sea posible, e incluya el nombre del riachuelo o del río)
 - What specific things it needs to survive at that stage /
Las cosas específicas que necesita para sobrevivir durante esa etapa
 - What threats or obstacles it faces at that stage /

- Las amenazas u obstáculos que encara durante esa etapa*
- What people can do to help salmon and steelhead /
Lo que las personas pueden hacer para ayudar al salmón y a la trucha del mar
 - Literary devices such as metaphors, symbolism, or imagery (or others identified by your teacher). / *Dispositivos literarios como metáforas, simbolismo, o imágenes (u otros identificados por su profesor).*

Resources / Recursos

Look at these web sites to help you answer the questions about salmon and steelhead life cycles./
Miren estos sitios de la red para contestar las preguntas de los ciclos de vida del salmón y de la trucha del mar (steelhead).

<p>Stages of the salmon and steelhead life cycles / <i>Las etapas del ciclo de vida del salmón y de la trucha del mar</i></p>	<p>Description of the salmon life cycle / <i>Descripción del ciclo de vida del salmón</i> (http://library.thinkquest.org/05aug/00548/species--life%20cycle.html).</p> <p>Another overview of the salmon life cycle / <i>Otra descripción del ciclo de vida del salmón</i> (http://www.vanaqua.org/salmontales/english/learningcentre/lifecycle.php).</p> <p>Salmon life cycle: early stages / <i>Ciclo de vida del salmón: primeras etapas</i> (http://www.krisweb.com/aqualife/lifecycle_early.htm).</p> <p>For practice with salmon migration and salmon life-cycle words, try a word search. Go to 'Bubble's Glug-Glug word search' / <i>Para practicar las palabras sobre la migración y el ciclo de vida de salmón, trate una búsqueda de palabras. Vaya a 'Bubble's Glug-Glug word search' [La búsqueda de palabras de Glug-Glug de Burbuja]</i> (http://www.goldseal.ca/kids/homepage.asp).</p>
<p>What salmon and steelhead eggs need / <i>Lo qué los huevos del salmón y de la trucha del mar necesitan</i></p>	<p>Find out what salmon eggs need to hatch / <i>Averigüe qué es lo que los huevos del salmón necesitan para salir del huevo</i> (http://library.thinkquest.org/05aug/00548/GoodStream.html).</p> <p>Then try designing a stream that will let the most salmon eggs hatch / <i>Entonces trate de diseñar una corriente que permita que la mayoría de los huevos del salmón salgan del huevo</i> (http://library.thinkquest.org/05aug/00548/StreamBuilder.html).</p>
<p>Migration patterns / <i>Patrones de migración</i></p>	<p>Read a description of the salmon's migration / <i>Lea una descripción de la migración del salmón</i> (http://www.ecotrust.org/publications/natural_history.html).</p>
<p>How people affect salmon and steelhead / <i>Como es que la gente</i></p>	<p>Play The Salmon Challenge Game to learn how people's everyday activities can affect water and salmon and steelhead health / <i>Juegue The Salmon Challenge Game [El juego del desafío de Salmon] para aprender cómo las actividades diarias de las personas pueden afectar el agua y la salud del salmón y de la trucha del mar</i> (http://dnr.metrokc.gov/wlr/waterres/sc.htm).</p>

<i>afecta al salmón y a la trucha del mar</i>	Click on 'Caring for Sammy' to learn about things that people can do to help salmon / <i>Presione 'Caring for Sammy' ['Cuidando por Sammy'] para aprender las cosas que las personas pueden hacer para ayudar al salmón (http://www.goldseal.ca/kids/homepage.asp).</i>
-----------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Name / Nombre: _____

Salmon or Steelhead Species Being Studied / *Especie del salmón o de la trucha del mar que Ud. estudia:* _____

Salmon and Steelhead Life Cycle / *El ciclo de vida del salmón y de la trucha del mar*

	Life Cycle Stage / <i>Etapas del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapas del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapas del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapas del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapas del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapas del ciclo de vida:</i> _____
What does a salmon or steelhead look like at this stage? Draw a picture and describe. / <i>¿Qué parece un salmón o una trucha del mar durante esta etapa? Dibuje y describa.</i>						
What size is it? / <i>¿De que tamaño es?</i>						

	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____
Describe its habitat./ <i>Describe su morada.</i>						
What is the name of the creek, river, or ocean where it lives? / <i>¿Cómo se llama el riachuelo, el río, o el mar donde vive?</i>						
What does it need to thrive? (For example, what are its temperature food, water, and oxygen, needs?) / <i>¿Qué necesita para prosperar?</i> <i>(¿Por ejemplo, qué temperatura, tipo de alimento, agua, y oxígeno necesita?)</i>						

	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____	Life Cycle Stage / <i>Etapa del ciclo de vida:</i> _____
What threats or obstacles does it face? / <i>¿Qué amenazas u obstáculos peligrosos encara?</i>						
How do people affect it? / <i>¿Cómo es que la gente lo afecta?</i>						
What can people do to help it? <i>¿Qué podemos hacer para ayudarlo?</i>						