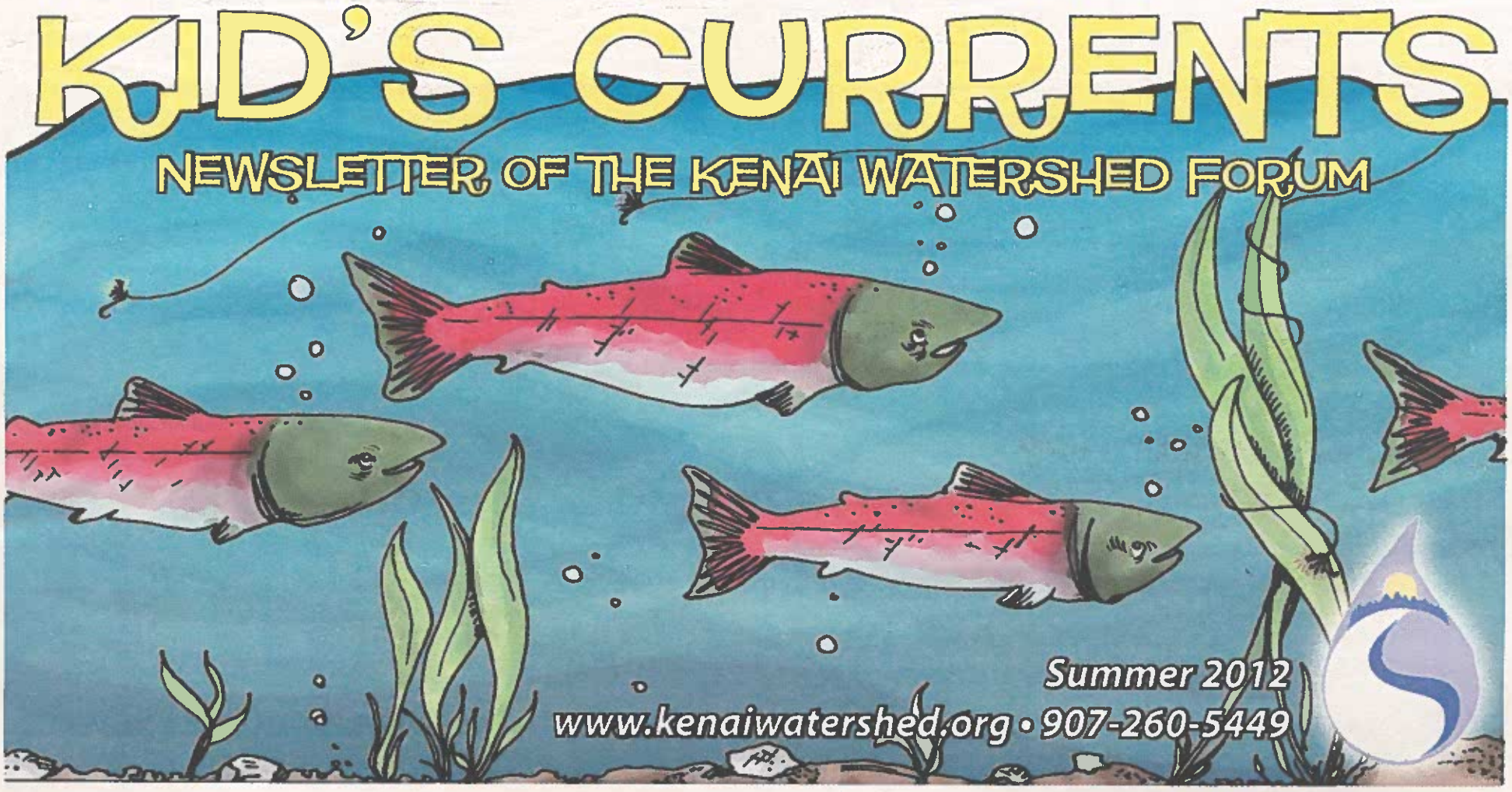
KID'S CURRENTS

NEWSLETTER OF THE KENAI WATERSHED FORUM



Summer 2012
www.kenaiwatershed.org • 907-260-5449

MAKING A DIFFERENCE... KIDS IN ACTION!

The streams and rivers that are home to salmon, trout, and other fishes are also places where garbage tends to collect. That's because our waterways are the lowest spots in our watershed, so they're downhill from EVERYTHING else. Rain water, wind, and gravity all help carry things into them. A disposable cup that gets tossed on the roadside, a toy left outside and blown away by the wind, and trash that flies out of a moving vehicle are all likely to eventually end up in our streams.

That's why Mr. Dan Pascucci and his Adopt-a-Stream classes spend time each spring doing stream clean-ups. Classes from Soldotna Montessori, Kenai Middle School, Tustumena Elementary, and Kaleidoscope School of Art & Science have picked up HUNDREDS of pounds of trash on creeks near their schools. This year the students removed over 70 bags of trash, a microwave, a bike, and a lawnmower from near-by streams and the surrounding community area.

You can help by picking up garbage in your neighborhood or along roadsides BEFORE it gets into streams and by always throwing your trash in a garbage can, NEVER on the ground.

FUN Fishy Stuff In this Issue...

DID YOU KNOW

Kenai River Quick Facts

Headwaters: Kenai Lake
Outlet: Cook Inlet
River length: 82 miles
Land that drains into river: 1.4 million acres
Average summer water temperature: 48*F
Average winter water temperature: 34*F
Fish: 40 different types

SALMON VS. STEELHEAD - WHAT'S THE DEAL?

Salmon and Steelheads are very different fish, but they belong to the same family- they are like cousins! They belong to the Salmonid family, which includes salmon, trout, and char. Pacific salmon and Steelhead trout both begin as eggs in freshwater streams, lakes, or rivers. Once they grow up and go out to the ocean, however, they become different from each other.

When salmon are ready to leave the ocean to go back to the place where they were born and lay their own eggs, their bodies have to change. Salmon store up enough fat in their bodies that they won't need to eat anything as they swim up the rivers. Once they spawn and lay their eggs, the salmon's life is over - their bodies decompose and give nutrients to their eggs.

When steelheads leave the ocean, they plan on coming back. Their bodies have to change, but they continue to eat as they swim upriver. Once they spawn and lay their eggs, the steelheads go back to the ocean for another year of eating and growing. They will continue this cycle for 3-6 years. Unless, of course, a fisherman, bear, or other predator eats them first!

This newsletter was prepared by Kenai Watershed Forum under award NA08NMF4380597 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, administered by the Alaska Department of Fish and Game. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, or the Alaska Department of Fish and Game.

FISHY WORDS

A **watershed** is the area of land where all of the water that is under it or drains off of it goes into the same place.

Alaska is home to five pacific **salmon** species: **Chinook**, **Sockeye**, **Chum**, **Pink**, and **Coho**.

A **redd** is a nest that is built by salmon and steelhead in the gravel of streams or the shoreline of lakes. This is where they **spawn** and lay their **eggs**.

After a while, the eggs hatch into **alevin**, which are tiny, weird looking fish that have little yolk sacs on their stomachs. After the salmon eat all the nutrients in their yolk sacs, they turn into **fry**. Fry are little fish that have parr marks to help them hide in the gravel so they don't get eaten by **predators**. Eventually the fry get bigger, lose their parr marks, and become more of a silver color- now they are **smolt**!

Then the fish swim downstream to the ocean. Before they go to the salt water, they must go through **smoltification**. During this process, lots of things about the fish's bodies have to change- even their **gills** (they use their gills to breathe)! After they live in the ocean for a while, salmon smell their way back upstream to the place where they were born so they can spawn and lay their own eggs before their life is done.

Fishes (like salmon) that move from freshwater to saltwater and back again are called **anadromous** fishes.

Steelhead Trout have a life cycle just like the salmon, except they can spawn and lay eggs more than once in their lifetime!

F	C	Z	B	J	S	C	U	P	T	J	Z	L	O	D
A	U	Z	C	A	O	G	H	M	E	U	H	C	D	A
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X	U	L	P	Q	E	Y	C	D	O	O	X	G	T	L
C	D	O	L	X	Y	U	E	Z	O	Q	O	P	G	E
U	H	X	M	L	E	H	V	N	J	K	R	K	F	E
L	B	U	K	O	S	G	W	S	M	O	L	T	S	T
P	C	Y	M	R	R	A	Y	Z	L	Q	Z	R	G	S
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N	Z	T	C	S	Q	A	A	N	I	V	E	L	A	L
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J	S	I	O	V	W	F	G	I	E	I	V	Y	R	G
M	Y	N	O	Z	U	J	T	N	D	Q	C	F	F	D

Salmon
Chinook
Sockeye
Chum
Pink
Coho
Steelhead
Trout
Watershed
Anadromous
Smoltification
Gills
Redd
Spawn
Eggs
Alevin
Fry
Smolt
Predator

DOT TO DOT... WHAT'S HIDING IN THIS PICTURE?

Salmon Are Important - Salmon are found in food chains in freshwater, in estuaries, and in the open ocean. They are an important food source for many animals including humans. In addition to being a food source, salmon carry marine derived nutrients back to our streams and release them back into our watersheds after they die.

DID YOU KNOW

Some salmon travel for two months or more to reach their spawning streams. All this travel take place without them eating one bite of food!

This activity courtesy of Columbia River Inter-Tribal Fish Commission.

Visit www.criftc.org

FUR, FINS, FLOWERS, FEATHERS, AND FUN!

Kenai Watershed Forum Summer Camp

FUR • FINS • FEATHERS • FLOWERS • FUN

Do you like learning about fish, plants, mammals, birds, and watersheds? Do you like exploring Soldotna Creek Park and appreciating the Kenai River? Do you like making new friends, singing silly songs, creating fun crafts, and spending lots of time outside? If you answered yes to any of these questions, KWF's Fur, Fins, Feathers, Flowers, and Fun Summer camp is for you! Mr. Dan and Miss Hannah spend their time from 9am-4pm, Monday through Friday helping kids like YOU have a great summer.

Each day has a different focus from our theme of Fur, Fins, Feathers, Flowers and Fun. Not only do we learn about different parts of the environment through activities and songs, we actually go out into the woods or near the water to see and touch the things we are learning about! The camp base is just a short walk to Soldotna Creek and the Kenai River, providing lots of bugs, fish, birds and foliage to explore and learn about! Throughout the week we not only learn about each of these important segments of our environment, but how they all fit together in our local ecosystem.

If you are between the ages of 6 and 12 and this sounds like fun, ask your parents to sign you up for camp! We start a new camp every Monday, with the last camp ending on August 10th. There is still room available in every camp session, but they are filling up fast, so stop by our office behind Soldotna Creek Park to register, or go to kenaiwatershed.org/camp.html to download the registration packet. There are scholarships available, so be sure to ask about those as well!

COLOR ME!

Bears certainly enjoy and need salmon and steelhead. Can you think of some other predators to salmon and steelhead?

RHYME TIME

CAN YOU USE YOUR RHYMING SKILLS TO FIGURE OUT THE MISSING WORDS???

There's lots of species of fish to check out,
like salmon and steelhead and dollys and _____.

One type of salmon with a back that is lumpy,
is the pink salmon also known as the _____.

The largest of salmon, if you take a look,
is surely the king also known as _____.

A steelhead is a trout that can cause great commotion,
they live in the rivers, but also the _____.

A silver is a salmon, but did you know,
that sometimes a silver is called a _____.

A rainbow is pretty in the sky when it's out,
but sometimes a rainbow refers to a _____.

Steelhead and salmon and rainbows expect,
to eat six-legged creatures we call _____.

A river is a thing that has a lot to give,
for a salmon and trout, a river is where they _____.

A Sockeyes a salmon with green on its head,
it's body matches it's other name _____.

DENA'INA & SALMON... A CULTURAL CONNECTION

The people known as Dena'ina have lived on the Kenai Peninsula for a very long time—about a thousand years. Salmon have always been a very important part of their culture. Long before there were power boats carrying people up and down the Kenai River to fish, the Dena'ina spent their springs and summers catching salmon in nets and weirs made from willow and alder saplings tied together with spruce roots. Traditional ways of preparing the salmon include drying, smoking, salting, and fermenting. These are all ways of preserving the salmon so that it would keep through the winter months.

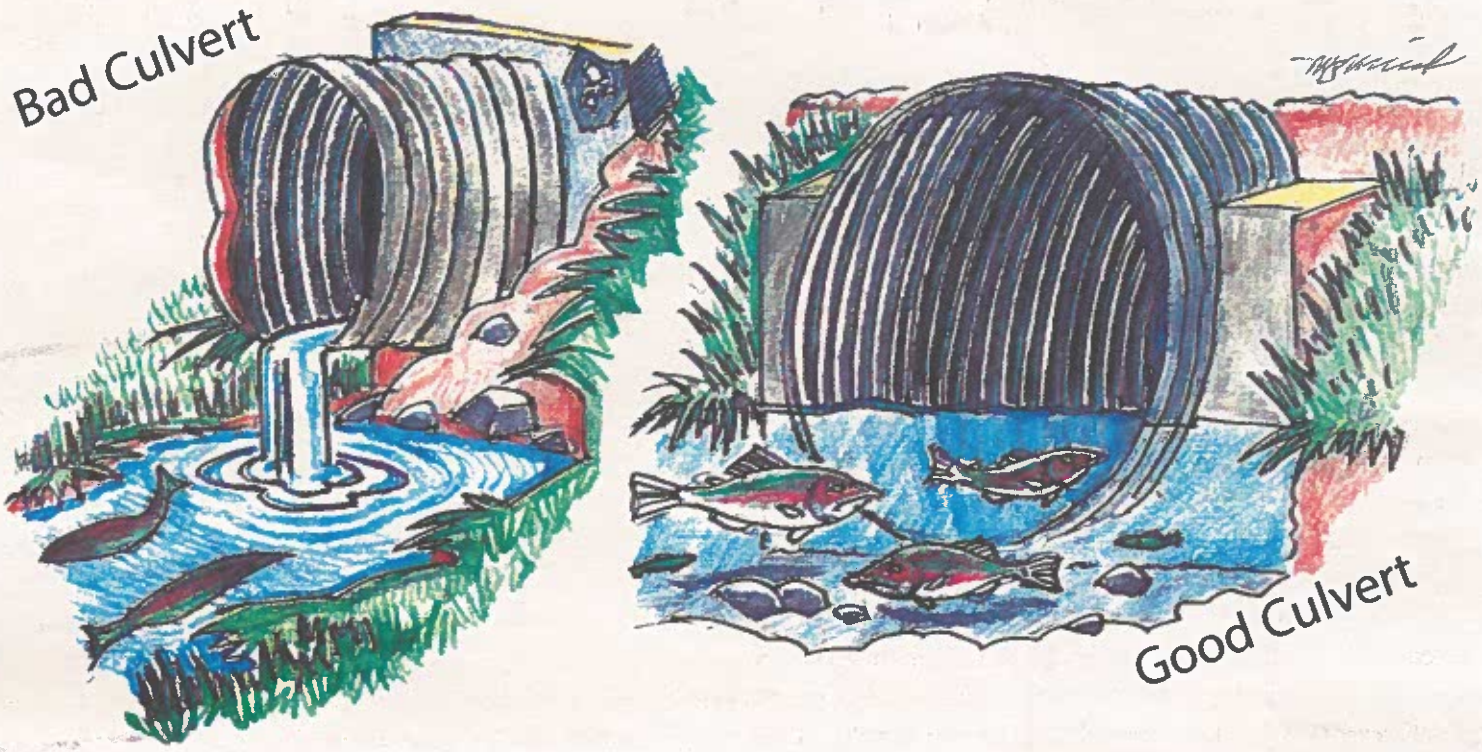
CLEAN WATER AND WATERSHEDS:

Everyone needs clean water! Plants, animals, and people are all affected by pollution - it can make all of us sick. Cross out the things that don't belong in a healthy river or stream, and color in the things that do belong.

FINDING LUNCH (WITHOUT BECOMING LUNCH!)

How far did you have to go to get your lunch today? Did you have to look under rocks or plants to find it? Did you have to hide from things that might eat YOU for lunch??? Salmon and trout have to do all these things in order to fill their bellies.

Young fishes (called fry) survive best in streams where they have lots of room to roam. More miles of stream habitat means more places to look for the tasty insects that they like to eat. It also means more hiding places from birds and bigger fishes that would like to eat THEM!



On the Kenai Peninsula, poorly-designed culverts are the most common "roadblock" for young salmon looking for insects and hiding places. A culvert is a large pipe that a stream goes through when it flows beneath a road or path. If the pipe is too small, the water flowing through it may be so fast that small fry can't swim against it to get to the other side. Pipes that are too high at their downstream end (more than 4 inches from the stream surface) also make it impossible for fry to pass through and get to the habitat on the other side.

Bad: Culverts that are too small or too high don't allow young fishes to get to all of the food and hiding places they need in order to have the best chance of surviving.

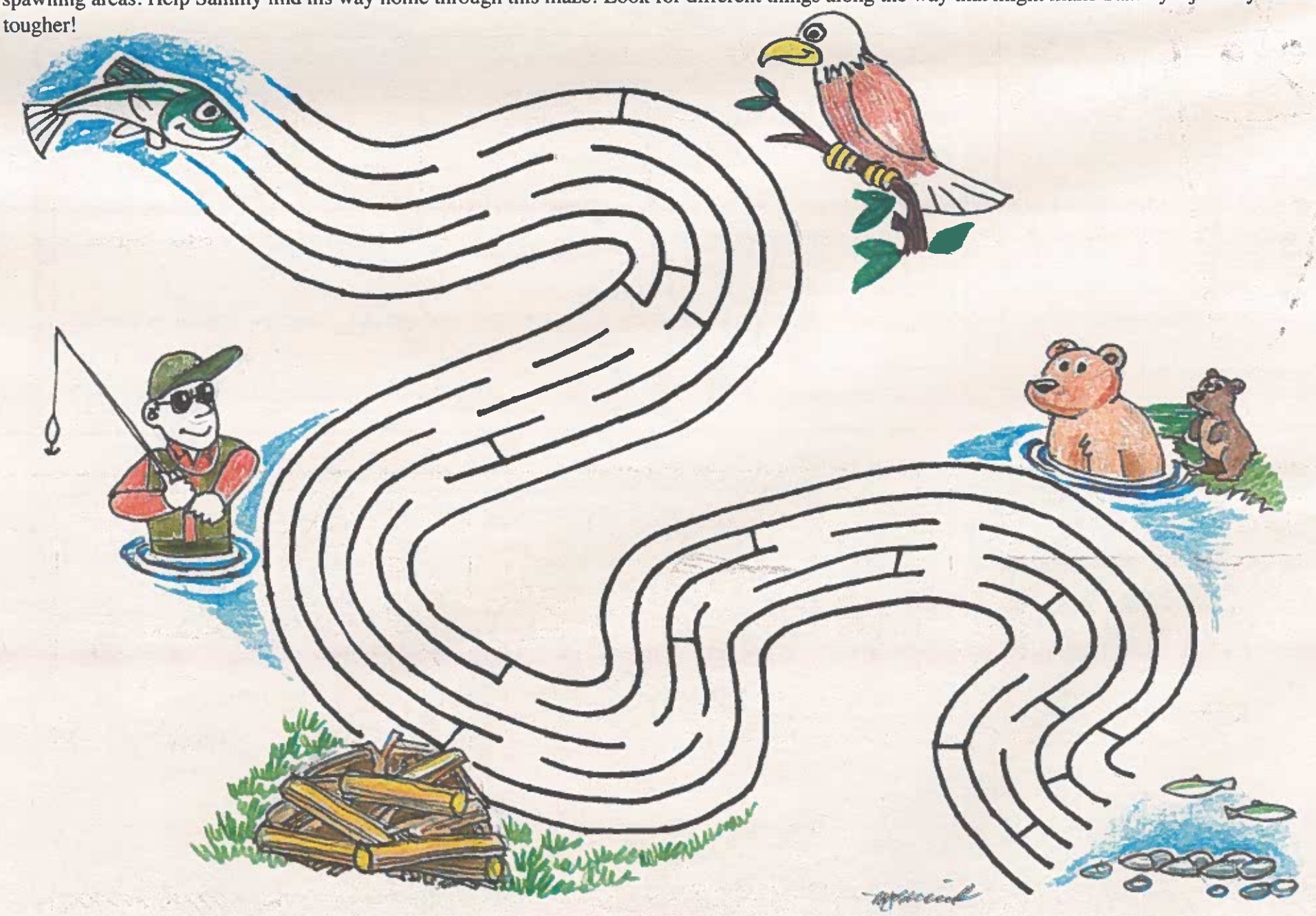
Good: Culverts that are large and at the same level as the natural streambed allow young fishes to swim to more habitat.

DID YOU KNOW

Kenai Watershed Forum has identified 712 stream crossings (culverts, bridges, etc.).
168 are Good | 99 are OK | 126 are Bad
302 need assessment
Total crossings restored since 2001: ~55

HELP SAMMY THE SALMON FIND HIS WAY HOME!

In addition to the culverts mentioned above, natural predators like eagles, bears, and beaver dams can make it difficult for salmon to reach their spawning areas. Help Sammy find his way home through this maze! Look for different things along the way that might make Sammy's journey a little tougher!



SCIENCE AT HOME

FISH & FRAGRANCE

Salmon and Steelhead actually sniff their way home from the sea using their incredible sense of small. Could you do the same thing? Actually, human noses are nowhere near as powerful as these fishes' nares (smelling organs).

Try this:
- Pour 1/2 cup of water into each of four containers
- Put one drop of perfume or extract of vanilla or peppermint into the first cup
- Put two drops of perfume or extract into the second cup
- Put four drops of perfume or extract into the third cup
- Put eight drops of perfume or extract into the fourth cup

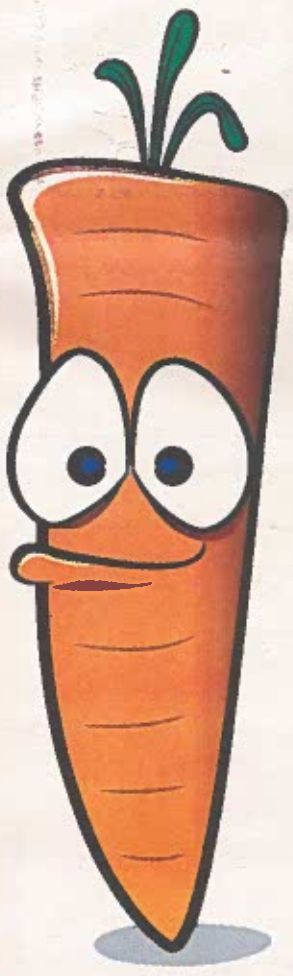
Label each cup with the number of drops of perfume or extract you added. Now mix the cups up, keeping the labels hidden. Try sniffing each cup. Can you smell the perfume or extract? How many drops of perfume or extract per 1/2 cup of water did you need to identify the smell? Try having another person take the same test. Was their sense of smell as keen as yours?

DID YOU KNOW

A salmon can detect one drop of water from its home stream mixed up in 250 gallons of sea water. Salmon will follow this faint scent trail back to their home stream to spawn.

Now imagine putting that 1/2 teaspoon of perfume or extract into a whole river. Do you think you could sniff it out? Amazingly, Salmon and Steelhead can smell much weaker scents in much more water!

THE SALTY CARROT



Salty seawater looks a lot like fresh stream water. But there's more to saltwater then meets the eye. Unlike anadromous fish, most living things can live only in salt or fresh water. What happens when you put a freshwater vegetable in salt water? This experiment shows what happens to the cells of some living things when they're exposed to salt water.

You need:
- Two cups
- Pitcher of warm water
- One carrot
- Three tablespoons salt
- Spoon
- Marker

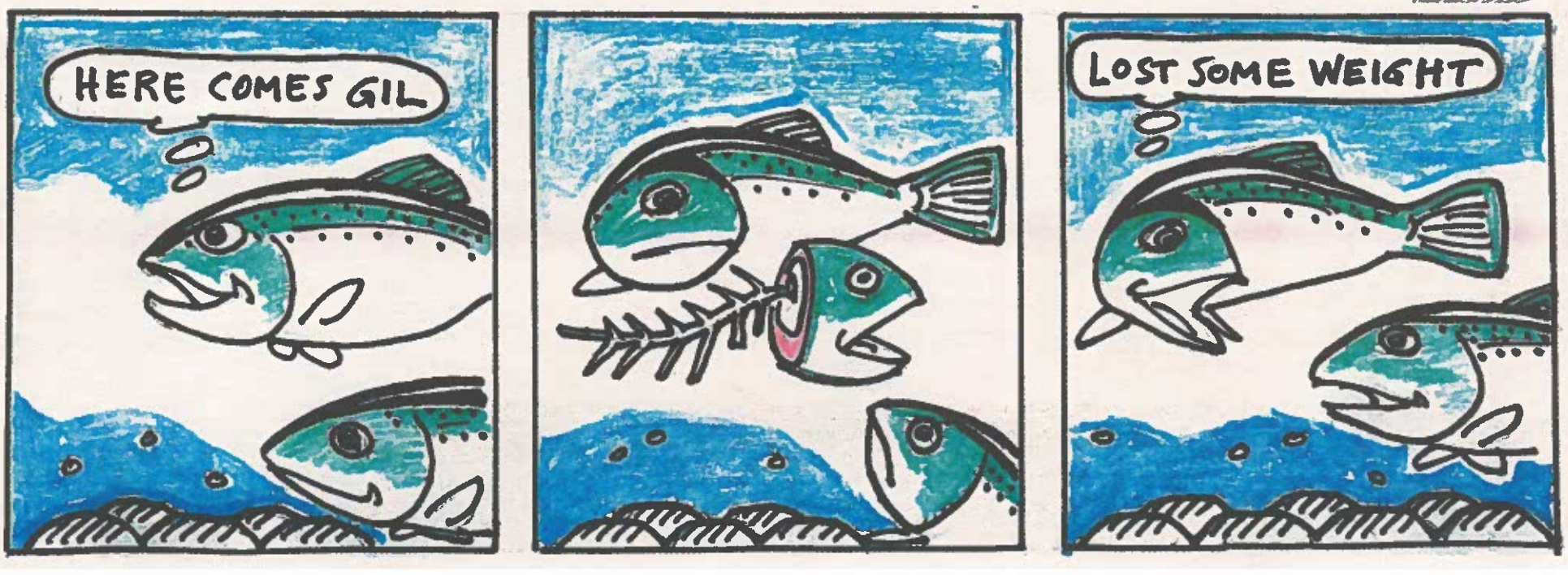
To do:
- Pour warm water into each cup, and stir the salt into one of the cups. Be sure to mark the salty cup.
- Break the carrot into two pieces.
- Put one piece of carrot into each cup so that it's covered with water.
- Check your carrots the next morning. Are both carrots still crisp? What happened to the carrot in the saltwater cup?
- To reverse the effects of your experiment, put the carrot that was in the salt water into the cup of fresh water. Check it again the next morning. What has changed?

Luckily, salmon and steelhead trout can fit into their saltwater surroundings so these results won't happen to them!

Activities courtesy of Trout Unlimited's Stream Explorers.

If you enjoyed these activities, consider getting the young person in your life a Stream Explorers membership to Trout Unlimited. Membership includes a subscription to Stream Explorers magazine, as well as other great perks. For all the details, **visit www.tu.org/youth**.

TROUT UNLIMITED



Spotlight on Youth

You're never too young to make a difference

See how youth in our community are making a difference!

ROC THE KENAI

By Courtney Stroh
Junior at Kenai Central High School

Although I began my service project because of a school assignment, I quickly realized I needed go beyond the "required homework" in order to find a solution to the large amount of fish waste left on the local beaches. Thus began my journey of service learning.

Left: Courtney and a friend ROCin'!
Above: Fish waste on the Kenai beach during the dip net fishery

I donated my time and energy to develop an environmental awareness program called "ROC the Kenai" which stands for "Respect Our Community". "ROC the Kenai" focuses on resolving the issue of proper disposal of fish remains generated by the dip net fishery at the mouth of the Kenai River and the prevention of the bacteria fecal coliform, which is created by the unnatural amounts of fish waste and seagulls. I worked with local environmental and government groups, fisherman, and residents to encourage personal efforts and government regulations to keep the Kenai coastline clean of fish waste throughout the summer dip net fishing season.

Securing funds for printing costs, I created a public awareness brochure to hand out to the dip netters as an educational tool. In addition, I received funds for "ROC the Kenai" T-shirts so my group can be easily recognized on the beach. My peers and I walked the beaches of the Kenai River during open season to hand out brochures and speak with people about the project.

Although progress is slow in bringing awareness to this problem, I have not given up. In fact, this summer, I formed a youth driven partnership with the Kenai Boys and Girls Club and Kenai Peninsula 4-H. In June, I chartered a 4-H club called "ROC the Kenai Club". I met with the Kenai Teen Center Director and the 4-H Director to plan the purpose and procedures of the club. In addition, I met with Fish and Wildlife and they agreed to supply the club with garbage bags and gloves to help with cleanup efforts. The club presented their plan to the Kenai City Council, allowing club members to experience public speaking, leadership, and the role of government. Creating a youth driven club, where members have the chance to become active and responsible citizens, adds significant depth to the purpose of "ROC the Kenai".

So if you happen to see local youth in bright orange T-Shirts who are cleaning, sharing information, and helping our community, don't be afraid to join in the fun and become part of "ROC the Kenai"!

WHAT YOU CAN DO . . .

- Pick up trash
- Help find a solution to excessive fish waste (composting, grinding, dumpster to landfill, barge to remove out to sea have all been mentioned, but too costly)
- Become a member of 4-H club, **ROC the Kenai**
- Join **ROC the Kenai** members on the Kenai beach during low tide to lend a hand

HOW TO LEARN MORE...

- Visit rocthekenai.org
- Visit the local library and find books about healthy environments & making a difference
- Visit www.kenaiwatershed.org
- Volunteer!!!

RESPECT OUR COMMUNITY

WHY SHOULD WE LISTEN TO THEM?

The Alaska Department of Fish and Game (ADF&G) has regulations, or rules, for fishing. These regulations are different for different rivers, streams, lakes, or even different areas of the same river! Sometimes these rules change every season, month, or week, so they can be hard to remember.

So why should we make sure we know and follow these regulations?

- We want all the rivers, streams, and lakes to be healthy
- We need to make sure there are enough fish left in the environment to lay enough eggs for there to be fish in the future
- We're not the only ones fishing- we need to make sure we are polite and helpful to others
- We need to keep the water, banks, and air clean and healthy in order to keep the fish healthy
- If you are caught breaking the regulations, ADF&G can give you a ticket and make you pay a fine.

Remember to know the regulations before you go!
For more information about fishing regulations and licenses visit:
http://www.adfg.alaska.gov/

STREAM DO'S & DONT'S

DO...

- Stand in the stream or on grates or boardwalks while fishing
- Use care when crossing a stream on horseback
- Clean up garbage in & around streams
- Observe our amazing fishes in their natural stream habitat
- Clean your waders before & after being in a stream

DON'T...

- Trample or disturb streambank vegetation
- Drive ATV's or snow machines through salmon streams
- Remove logs or large rocks in the stream--fishes need these hiding places!
- Move fishes from one stream to another
- Transport invasive species on your clothing or waders

Kenai Watershed Forum (KWF) is a local 501(c)(3) non-profit organization dedicated to maintaining the health of the watersheds on the Kenai Peninsula, Alaska. KWF is recognized as the regional watershed organization of the Kenai Peninsula, Alaska, successfully identifying and addressing the needs of the region by providing high quality EDUCATION, RESTORATION, and RESEARCH programs.

Our mission is "working together for healthy watersheds on the Kenai Peninsula". KWF is a dynamic and maturing organization that is poised to serve the Kenai Peninsula and the State of Alaska with increasing effectiveness in the near and distant future.

Kenai Watershed Forum
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www.kenaiwatershed.org

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Yes! I want to support KWF!

Here is your chance to give something back! Help support our mission through a financial contribution. Everyone who lives and plays on the Kenai Peninsula benefits from remarkable natural resources. Your membership gift gives you a role in shaping the future of the Kenai Peninsula watersheds. You will enjoy our newsletter, Currents, invitations to special events, and many other unique benefits.

Contact Information

Name: _____
Address: _____
City: _____ *State:* _____ *Zip:* _____
Phone: _____
Email: _____

Level

___ *$500 Benefactor* ___ *$100 River Steward*
___ *$50 Chinook* ___ *$25 Sockeye*
___ *$10 Smolt* ___ *$Other* _____

Payment

___ *Enclosed is my donation*
___ *Please charge my credit Card*

Credit Card Number _____ *Exp. Date* _____
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KC