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Mission: To protect and restore the Yuba River by advocating powerfully, engaging in active stewardship, educating the public, and inspiring activism from the Sierra to the sea.

Want more copies?

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www.yubariver.org

A special thank you to Sandra Lowry, Yurok, for the story and basketry design on "Catch of the Day."

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What are salmonids?

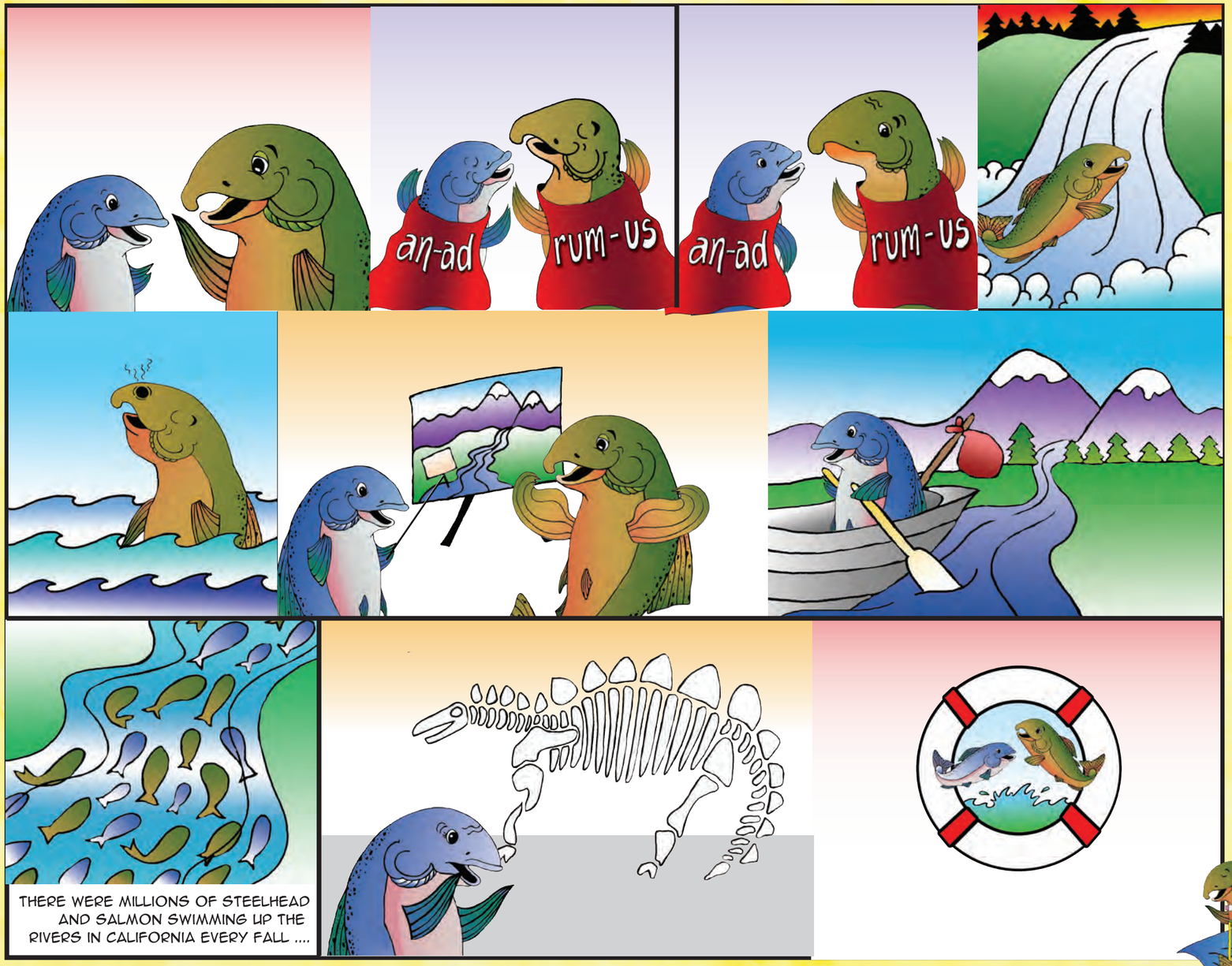
Cool Salmonid Facts

You can find steelhead like Flo all over California—from the dry lands in Southern California to the redwoods of Northern California.

Over 137 different kinds of animals eat salmon and steelhead.

In just one year, people in California caught 5,526,400 pounds of salmon. That's twelve times more than the Statue of Liberty weighs!

"Tiny" is really just a nickname, because the largest salmon ever caught was 126 pounds!



Word Scramble

Unscramble the words below to complete the sentences. Check these two pages for clues.

1. Fish that are born in freshwater, but swim to the ocean and back are called _____ (radanusmoo.)

2. Many populations of salmon and steelhead are in danger of disappearing, so they are called _____ _____ (eddeeangrn escispe.)

3. Salmon and steelhead connect the_____ (nceoa) to the _____ (erirv), so they're called the bluewater to whitewater connection.

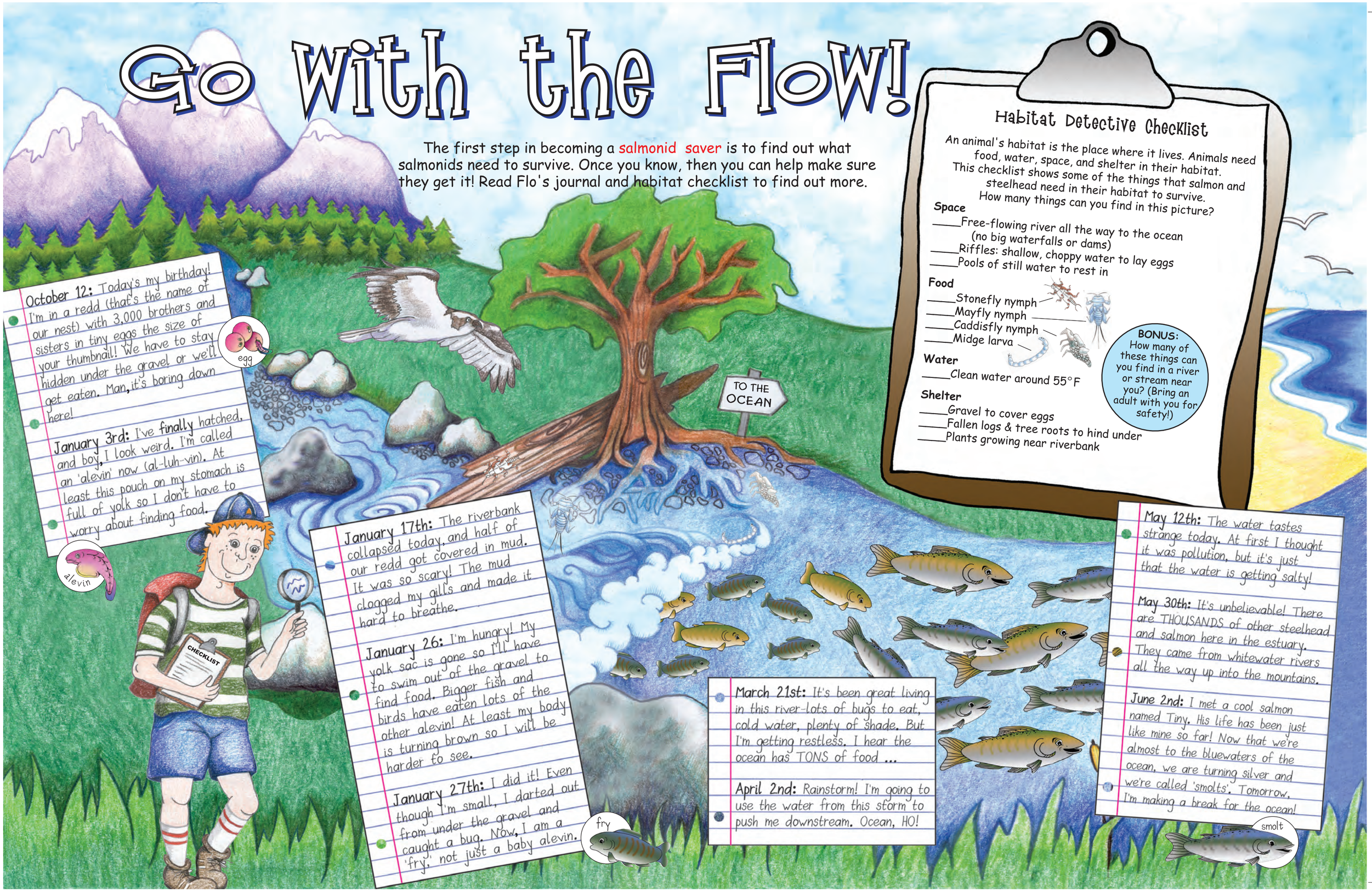
4. Salmon and steelhead are so strong that they can jump over _____ (trllfsaawe.)

5. People who help salmon and steelhead are called _____ _____ (dmsliano aevssr.)

Did You Know?

Go With the Flow!

The first step in becoming a salmonid saver is to find out what salmonids need to survive. Once you know, then you can help make sure they get it! Read Flo's journal and habitat checklist to find out more.



October 12: Today's my birthday! I'm in a redd (that's the name of our nest) with 3,000 brothers and sisters in tiny eggs the size of your thumbnail! We have to stay hidden under the gravel or we'll get eaten. Man, it's boring down here!

January 3rd: I've finally hatched, and boy, I look weird. I'm called an 'alevin' now (al-luh-vin). At least this pouch on my stomach is full of yolk so I don't have to worry about finding food.

January 17th: The riverbank collapsed today, and half of our redd got covered in mud. It was so scary! The mud clogged my gills and made it hard to breathe.

January 26: I'm hungry! My yolk sac is gone so I'll have to swim out of the gravel to find food. Bigger fish and birds have eaten lots of the other alevin! At least my body is turning brown so I will be harder to see.

January 27th: I did it! Even though I'm small, I darted out from under the gravel and caught a bug. Now, I am a 'fry,' not just a baby alevin.

March 21st: It's been great living in this river-lots of bugs to eat, cold water, plenty of shade. But I'm getting restless. I hear the ocean has TONS of food ...

April 2nd: Rainstorm! I'm going to use the water from this storm to push me downstream. Ocean, HO!

May 12th: The water tastes strange today. At first I thought it was pollution, but it's just that the water is getting salty!

May 30th: It's unbelievable! There are THOUSANDS of other steelhead and salmon here in the estuary. They came from whitewater rivers all the way up into the mountains.

June 2nd: I met a cool salmon named Tiny. His life has been just like mine so far! Now that we're almost to the bluewaters of the ocean, we are turning silver and we're called 'smolts'. Tomorrow, I'm making a break for the ocean!

Habitat Detective Checklist

An animal's habitat is the place where it lives. Animals need food, water, space, and shelter in their habitat. This checklist shows some of the things that salmon and steelhead need in their habitat to survive. How many things can you find in this picture?

Space

____Free-flowing river all the way to the ocean (no big waterfalls or dams)
____Riffles: shallow, choppy water to lay eggs
____Pools of still water to rest in

Food

____Stonefly nymph
____Mayfly nymph
____Caddisfly nymph
____Midge larva

Water

____Clean water around 55°F

Shelter

____Gravel to cover eggs
____Fallen logs & tree roots to hind under
____Plants growing near riverbank

BONUS: How many of these things can you find in a river or stream near you? (Bring an adult with you for safety!)

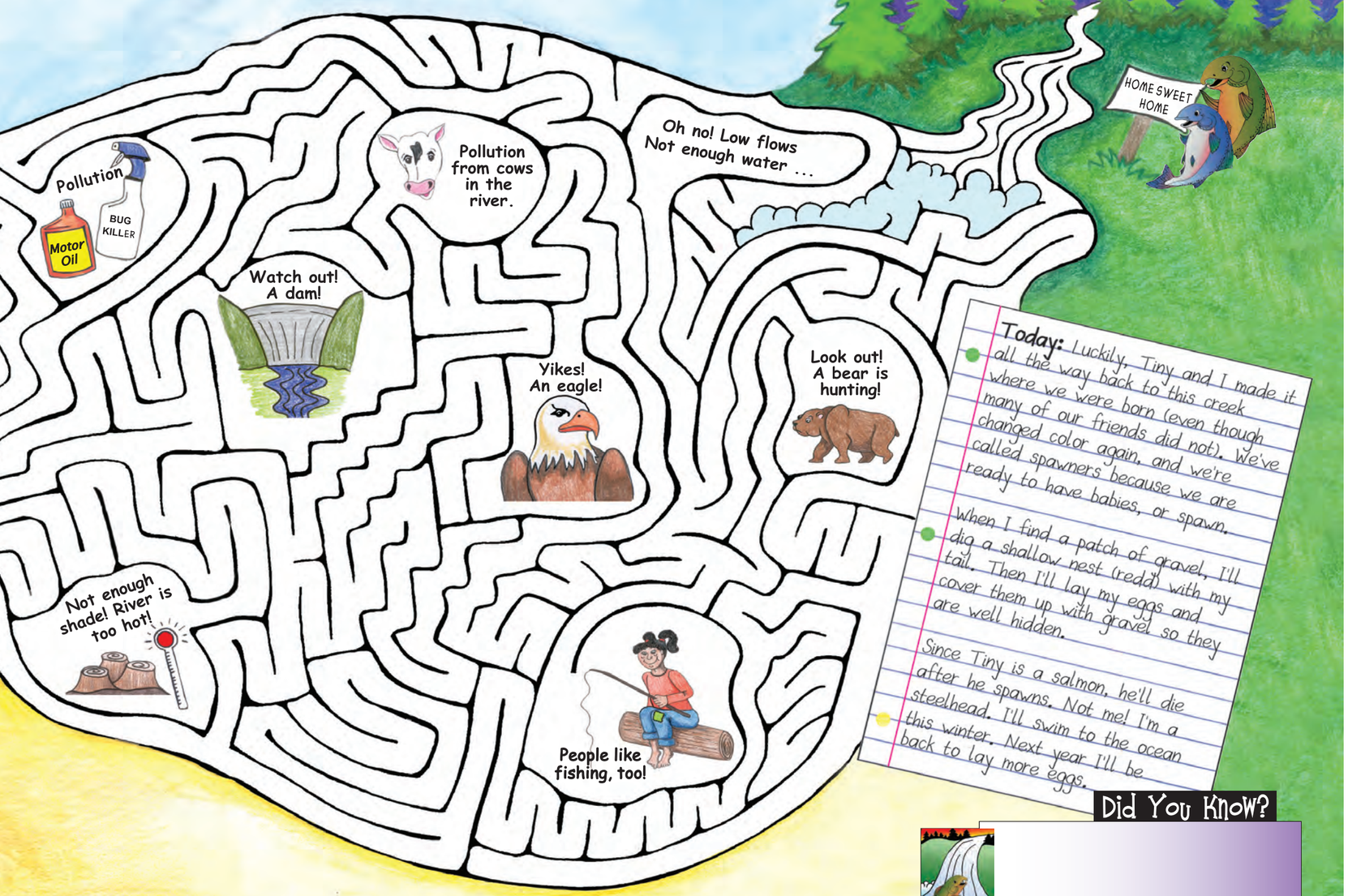
Up the Creek Without a Paddle

The bluewaters of the ocean were fun, but lately, Tiny and Flo have been thinking about heading home. It's been raining, and the rivers are rising again.

Tiny and Flo want to find their cool whitewater streams to make a nest. Will you help them find their way past the obstacles to get back home?

3 YEARS LATER

August 24th: I've been in the ocean for nearly three years! I've grown to be 18 pounds (Tiny weighs 50!), I've escaped from fishing hooks twice, swum to Canada, and come this close to touching a whale!



I'm lucky to be alive! Here's how my body has changed to help me survive in the ocean habitat.

Shark-Proof Camouflage: Sharks can't see me from below because my silvery stomach blends in with the sky. And from above, my dark back blends in with the ocean bottom.

Whale Warning Device: Eyes on the side of my head let me see in all directions!

Seal Sensor: I smell danger coming (and swim away fast!)

Sea Lion Line: This tiny "lateral line" of holes down the side of my body lets me feel vibrations in the water. No sea lion sneaks up on me.

Schooling: I swim in a big group of fish called a "school." When animals come to eat me, I hope they eat the other fish instead!

Today: Luckily, Tiny and I made it all the way back to this creek where we were born (even though many of our friends did not). We've changed color again, and we're called spawners because we are ready to have babies, or spawn.

When I find a patch of gravel, I'll dig a shallow nest (redd) with my tail. Then I'll lay my eggs and cover them up with gravel so they are well hidden.

Since Tiny is a salmon, he'll die after he spawns. Not me! I'm a steelhead. I'll swim to the ocean this winter. Next year I'll be back to lay more eggs.

Did You Know?

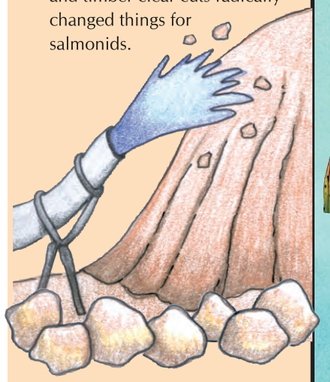
Catch of the Day

Ever since people have been in California, salmonids have been an important source of food. Salmonids are a resource for everyone and are held in a Public Trust. This means that people have developed ways to take care of them for future generations. Check out the timeline and story to see some of the ways that people take care of the fish AND what happens when they forget.

A Salmonid Timeline

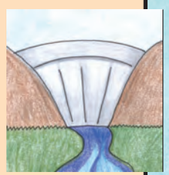
1500s: European explorers came to the Western United States and saw Native American tribes catching salmonids for food and clothing.

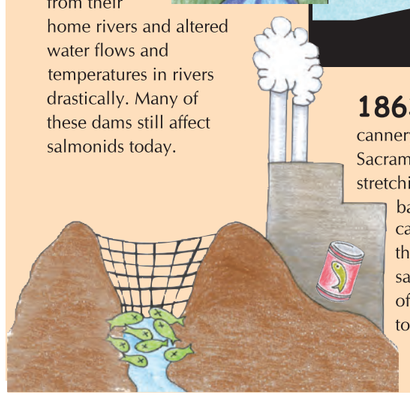
1805: Lewis and Clark were welcomed to the Pacific Northwest with a meal of salmon. Salmonids were still plentiful due to careful fishing by Native Americans, but the fur trade, gold rush, railroads, and timber clear cuts radically changed things for salmonids.

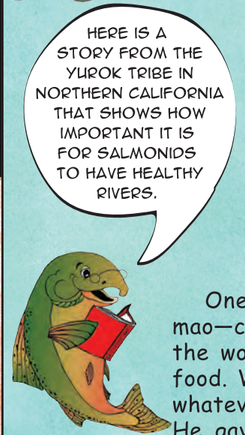


1848: Gold Rush! Gold miners used water cannons to blast the hills and find gold. Soil washed into rivers, changing the habitat and killing salmonids.

1850: People built dams to store water. But the dams cut salmonids off from their home rivers and altered water flows and temperatures in rivers drastically. Many of these dams still affect salmonids today.







In the beginning, the world was a very different place. There were no people at all—only spirits called woge (pronounced woh-gay).

One day, the Great Spirit—whose name was Wah-pec-ah-mao—called all the woge together. He told them it was time to fill the world with people and to give them trees, rocks, water, and food. Wah-pec-ah-mao told the woge that they could each choose whatever they wanted to be to help the Yurok in this new world. He gave them examples of the things they might be, how they might look, and what their jobs might be.

One of the woge was called Oregos, and she wanted to help people. Wah-pec-ah-mao told her that if she chose to be a rock at the mouth of the Klamath River, right where it meets the ocean, then she would have a chance to help people forever. So Oregos decided to become that rock.

She turned into the image of a woman with a basket on her back for carrying heavy loads to honor the Yurok women's qualities of hard work and caring. The job of Oregos was to guide the fish so the Yurok would have lots of salmon to dry and smoke for their winter food.

Every fall, when the maple leaves begin to turn red, the salmon return from the sea. They go straight to Oregos to find out if it is safe for them to go up the river to the spawning grounds where they were born.

Oregos knows every stream, the big ones and the small ones. She knows how deep the water is and whether the river is blocked by dirt or rocks or fallen trees. She knows whether the gravel where the salmon lay their eggs is clean or covered with mud. She knows how many bear, otter, and eagles might try to harm them as they swim up the river. And she knows exactly when the rains will come. It is her job to know about everything that will affect the fish—not just salmon, but steelhead, eels, candlefish, trout, and sturgeon.

As the salmon gather around Oregos, the rains come and fill the streams, making it easier for the fish to swim. When the conditions are just perfect, Oregos tells the fish that it's time. Happily, they dash upstream to their spawning grounds, their silver bodies flashing in the light. Oregos has helped the fish get back home once again.

For as many years as anyone can remember, Oregos has assisted the Yurok people by guiding the fish they depend on for food. If you go to the Klamath River today, you can see Oregos where the river meets the ocean, still guiding the fish home.

TODAY: Salmonid Savers all over California are working to help salmon and steelhead.

2011: The South Yuba River Citizens League (SYRCL) restores 5 acres of habitat in the Yuba River to provide food, shelter, and clean cool water to support salmonid survival.

2008: After restoring habitats for fish passage and releasing thousands of salmon fry into the Russian River, the first migrating salmon since the 1990's returned to the river!

2007–2012: All along the California coast a network of 124 Marine Protected Areas were put in place to protect and conserve marine life including ocean–going salmonids for their ultimate journey back to spawn.

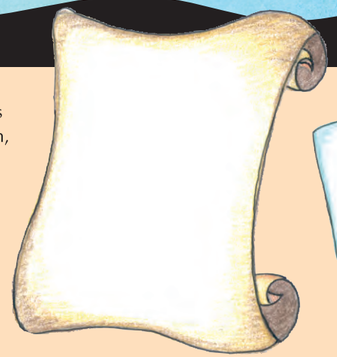
1999: People removed two dams on Butte Creek near Chico, California, that were blocking salmonids from 25 miles of river habitat. Others helped Salmonids by restoring riverbanks, replanting trees, creating spawning sanctuaries, and cleaning rivers.

2002: 34,000 salmon died on the Klamath River in Northern California because the water was too hot and they got sick. There is still work for Salmonid Savers like you!

1994: The first California salmonids were protected under the Federal Endangered Species Act. It set rules to limit harmful activities like clear-cutting trees near rivers, over-fishing, and removing too much water from rivers.

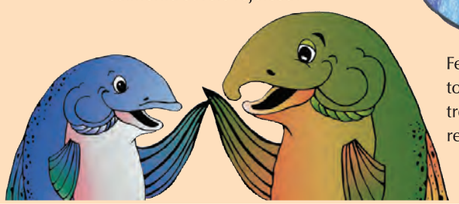
1863: First salmon cannery opened on the Sacramento River. By stretching fishing nets from bank to bank, people caught so many fish that huge piles of salmon, many full of eggs, were left to die.

1884: Mining with water cannons was made illegal. Clean water flowed once again, and fish could breathe and grow strong!



1970: The first Earth Day inspired people to protect the environment. Later that year, the Environmental Protection Agency (EPA) was formed.

1977: The United States Congress passed the Clean Water Act to protect water quality and keep our rivers clean. Salmonid Savers rejoiced!



Our Biggest Challenges are the 4H's

Habitat Destruction

Our habitat is the place we live, from streams to the ocean. Anything that hurts our habitat, by putting pollution or mud in it, or by taking too much water out of it, can really hurt us.

Hydro (Dams)

Imagine swimming into a very big wall! With a dam in the way, Tiny and I are cut off from some of our best habitat. For thousands of years our ancestors swam to spawning streams high up in the watershed. Now, we have to search high and low for passages to other places if we are to survive and spawn.

Harvest

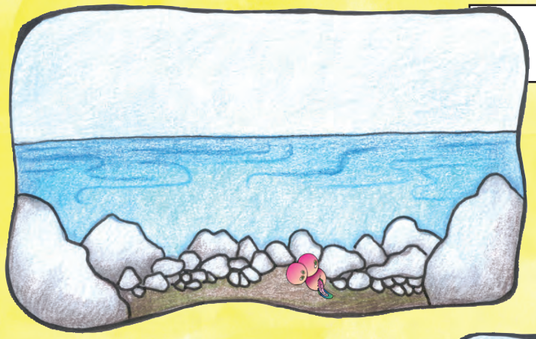
When people catch too many fish and don't follow fishing regulations, there aren't enough of us left to lay eggs for next year.

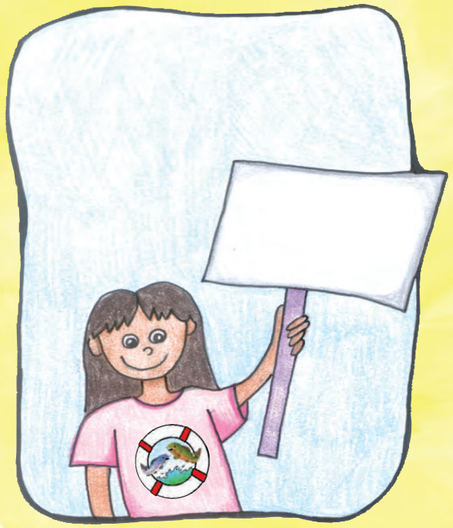
Hatcheries

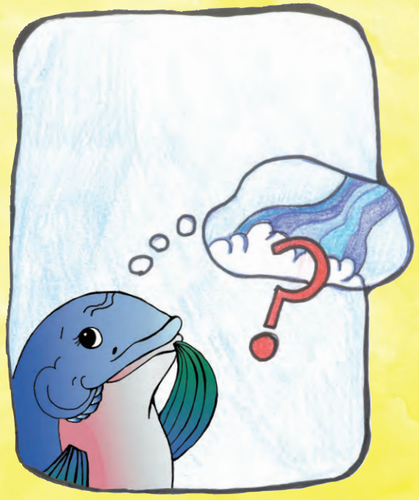
People build hatcheries (buildings where salmon can grow up) to replace habitat blocked by dams. Hatcheries do ensure high survival of fry, but hatchery fish can spread diseases and fight with wild fish for food.

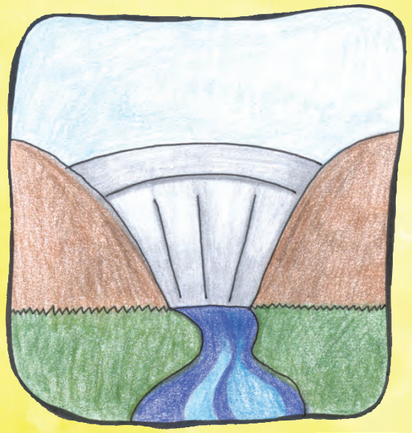
Fortunate or Unfortunate?

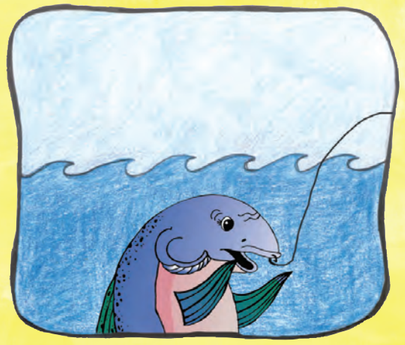
Will Flo and Tiny's fate be fortunate or unfortunate? Put the pieces of the story in order to find out. The first piece is done for you.

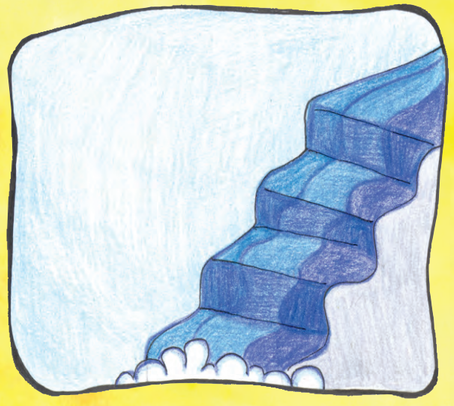


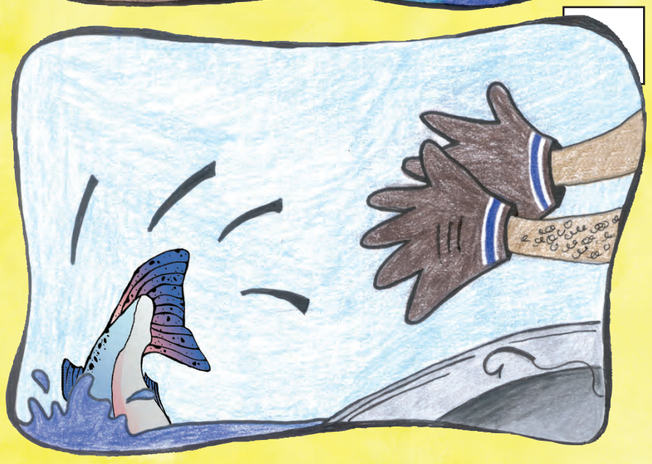












You Can be a Salmonid Saver!

You can help! Guess how much water you can save by...

(Match each number with the correct sentence)

1. Turning off the faucet while you brush your teeth. Save _____gallons per brushing.
2. Finding and fixing leaky toilets. (Put food dye in the tank, wait 15 minutes, and see if it turns your toilet water blue. If it does, you have a leak!) Save up to _____gallons per year.
3. Taking a shorter shower. Save _____gallons per minute.
4. Washing only full loads in your washing machine and dishwasher. Save _____gallons per year.
5. Drinking a glass of water instead of a can of soda. Save _____gallons per glass.
6. Using recycled paper instead of non-recycled paper. Save _____gallons per ton of paper.
7. Using a broom to clean the driveway (not a hose.) Save _____gallons in 5 minutes.
8. Washing your car with a bucket of water instead of a hose (or take it to a car wash that recycles their water). Save _____gallons for a 15 minute wash.
9. Putting plastic bottles filled with water in your toilet tank. Save_____gallons per flush.
10. Watering your lawn at night (instead of when the sun is out). Save up to _____gallons per watering.

1
4
62
2,000
16.5
100
35
500
60,000
2
100

Most people use 160 gallons of water every day. That doesn't even include all of the water that we use to grow our food and to make things like paper, clothes, and cars. **BE A SALMONID SAVER, AND USE LESS WATER!**

Cross out the letters Q, Z, X, and J to find out what else you can do to become a salmonid saver.

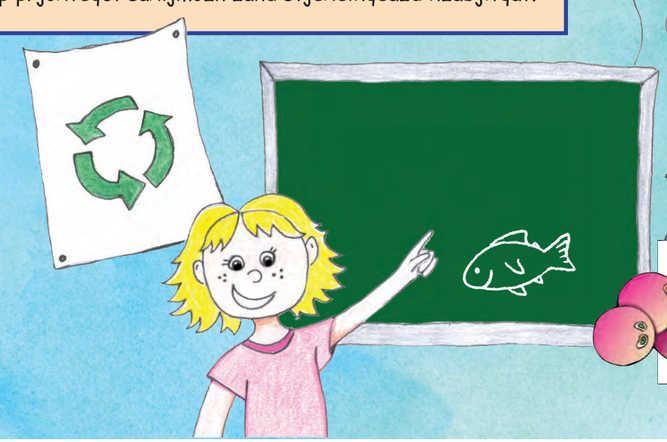
Xkejezp ozur qwzatxer cljezan! Javozid spzqilljing ajsozline, qoil, soqap jor zotxhejr pxollqutaznts zin tqhe waqtezr zor jon jlanxd.

Qozick jup lizttqer, zinqcludjing zwojrn qlizne, jold hoxojks, qand jtrxaszh txhazt zotqher pezopqle jdroqpped.

Zrejduqce hozw jmuzch yoqu bquy, zrejuse zold cojntazinqers, jaznd qrecjyxcle toz sajvxe wajtqer xajnd jenexrgzy zanjd pxrejveqnt pxollqutzijon.

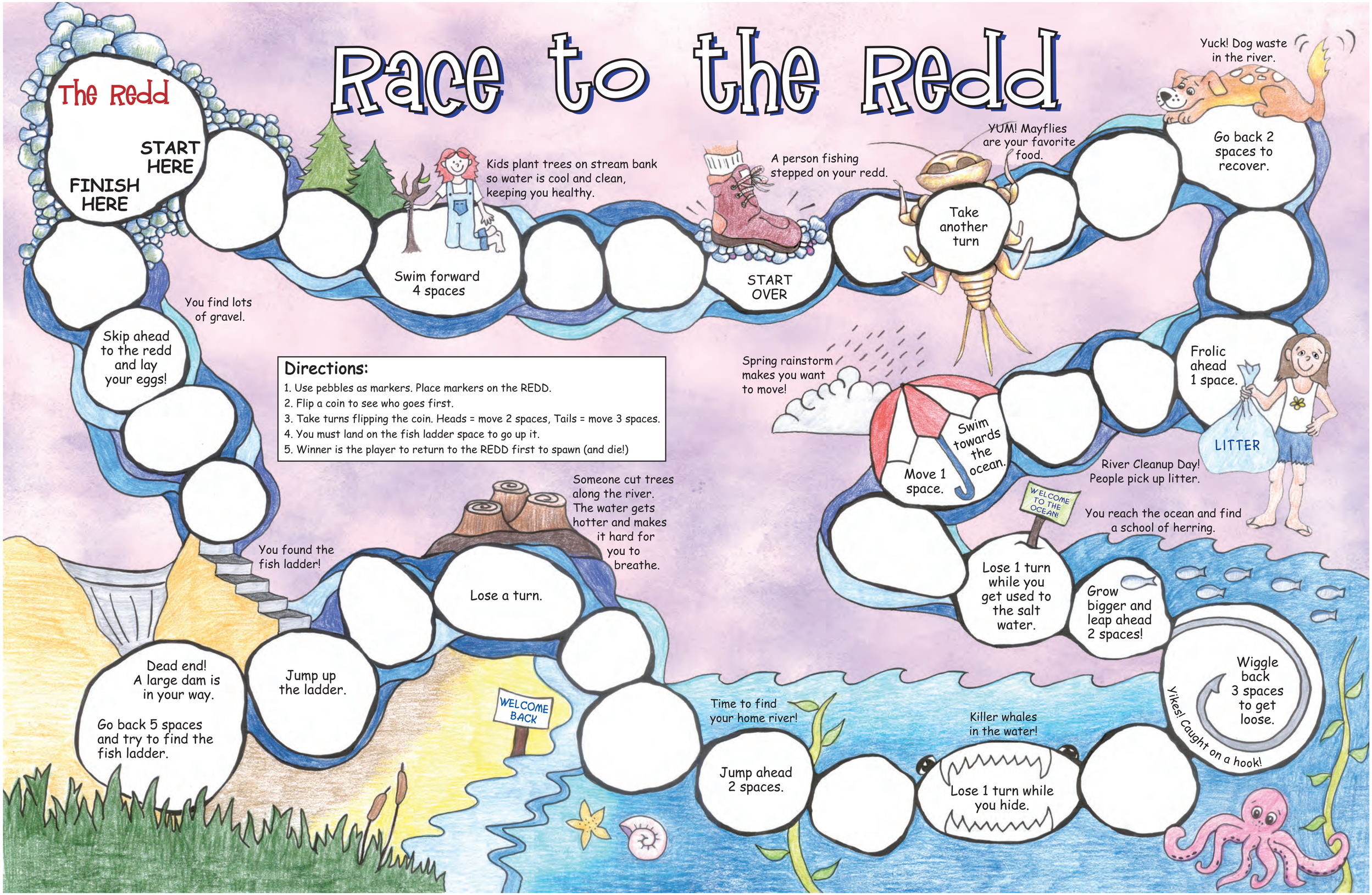
Qtajke thjex Ejthixcaql Aqngljer pljeqdge tox bze qrejspecxtfuql whxejn yjoqu'rxe fjixshiqng (www.boatus.com/angler/survey.htm)

Jtejll yjoqur fxrijenqds xajnd fjaxmqily hozw jthxey cxan hqejlp prjoxteqct saxljmozn zand stjexelhqeazd hzabjitqat.



Know?

Race to the Redd



Directions:

1. Use pebbles as markers. Place markers on the REDD.
2. Flip a coin to see who goes first.
3. Take turns flipping the coin. Heads = move 2 spaces, Tails = move 3 spaces.
4. You must land on the fish ladder space to go up it.
5. Winner is the player to return to the REDD first to spawn (and die!)