# Call in the Expert

The mayor of Claymount calls Mei Chan to help. Ms. Chan is a park **ranger**. She studies a map of the stream to see what might be causing the problems. Then she predicts some reasons for the drop in the number of fish. She makes a star diagram of her predictions.

Dropping Numbers of Fish

Waste from the dairy factory raising the temperature of the stream

Animal waste from dairy farms polluting the stream

Waste from the dairy factory polluting the stream

Too many people fishing in the stream

Soil and mud from the mill seeping into the stream
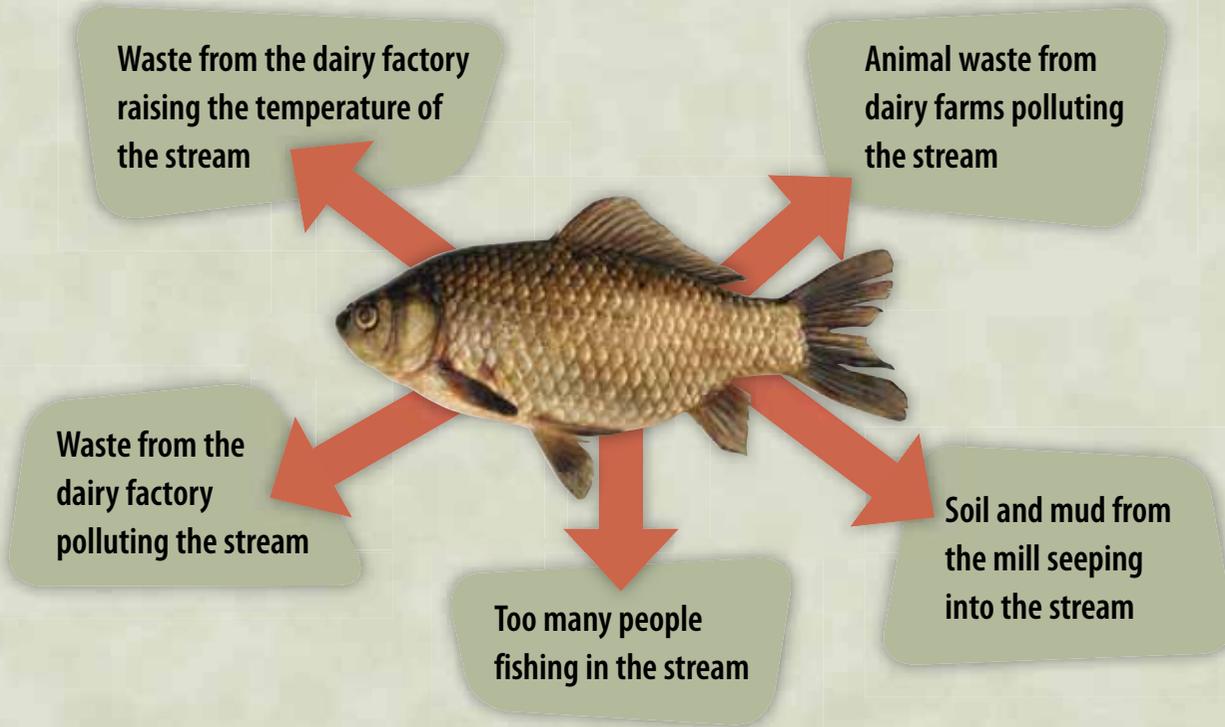
Ms. Chan will collect data on Claymount Stream. She also needs data on the stream's ecosystem. This will help her find answers.

Claymount Stream Map

dairy farm

dairy factory

town

mill

reserve
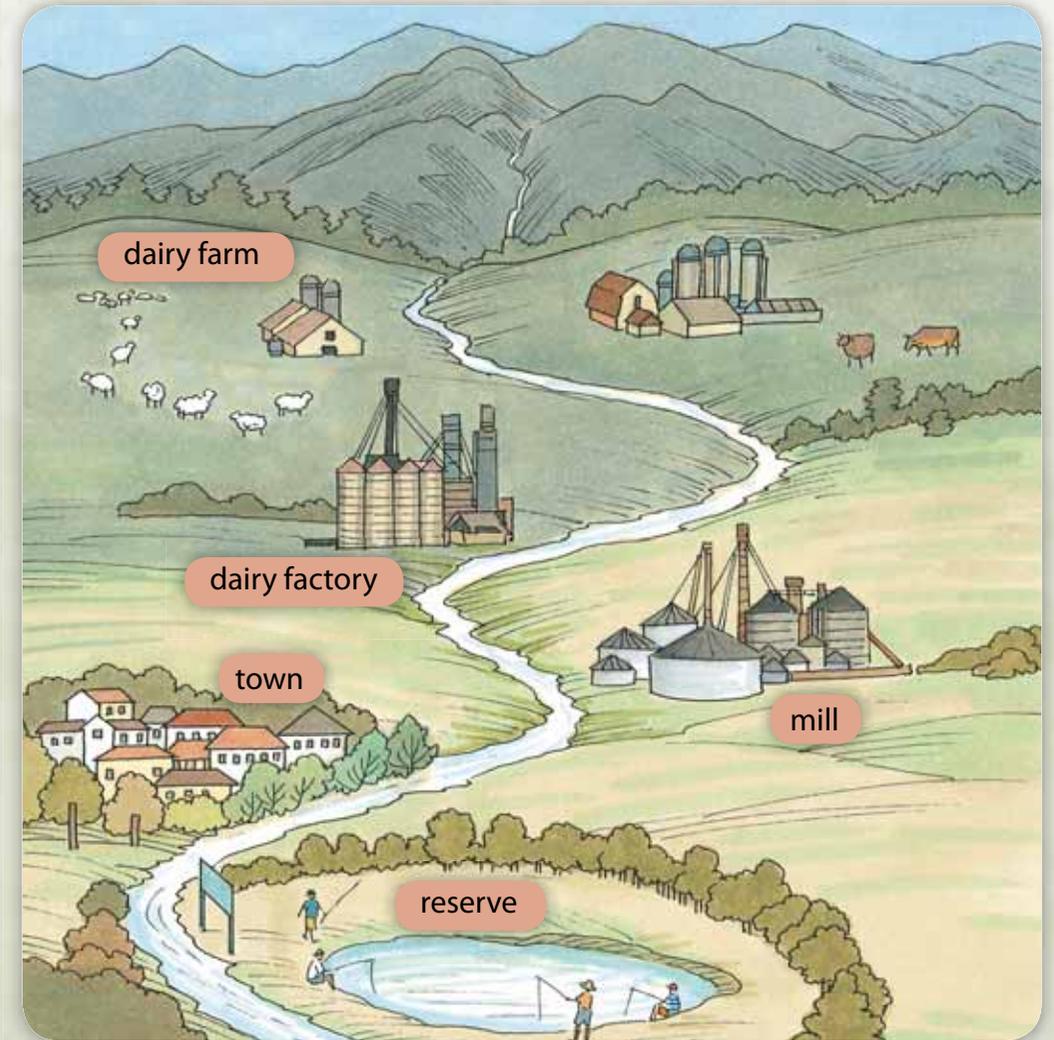
The Mill

The Claymount Mill turns grain into flour. Water from the stream is used to create power for machines at the mill. To get the water, the mill is built right on the stream bank. This could cause the bank to erode. Mud and soil may slip into the stream.

Collecting Data

Water Temperature

First, Ms. Chan tests the stream's water temperature every day for a week. Then she tests the water temperature of 3 nearby streams. She makes a table of her data and **compares** the results. The water temperatures are almost the same. So she **concludes** that water temperature is not causing the problem.

Temperature Results

Stream	Average May temperatures in degrees Celsius
Wattle Stream	12.3°C
Luke Stream	13.1°C
Chattel Stream	11.2°C
Claymount Stream	11.9°C

LET'S EXPLORE MATH

Look at the average temperatures for the 4 streams.

a. Round each temperature to the nearest degree Celsius.

b. Create a table ordering these temperatures from highest to lowest.

Clean Water?

Then Ms. Chan tests Claymont Stream's water to see how much soil is in it. The water is clear. So the mill is not the reason why fewer fish are in the stream.
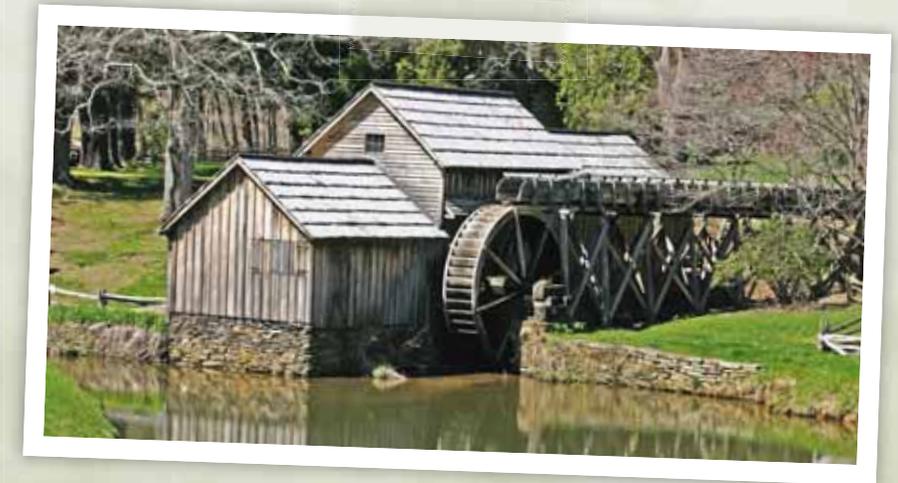
Next, Ms. Chan tests how clean the water is. The results are normal for a stream. **Pollution** does not seem to be a problem.