



March Monitoring Month

Waterways Activities

Investigations/Challenges

1. Our stream is part of a catchment

Find out some of the good and not so good things that are happening in your catchment. Scan or draw a catchment map and add notes and pictures of different land and water uses that could affect stream health. See

http://www.ew.govt.nz/forschools/teachers/classroomunits/documents/Rivers_ImpactWaterUseQual.pdf

Also check out Google Earth <http://earth.google.com/> and zoom into your catchment to get an ICM approach to your investigations.

2. Rainy Day

Measure the rainfall in your area over a period of time and then relate your findings to stream flow.

A simple rain gauge can be built from instructions at

<http://www.pcpages.com/uplyme/gauge.html>

http://www.ew.govt.nz/forschools/teachers/classroomunits/documents/Rivers_photocopyMasters.pdf - Photocopy master 18a & 18b

3. What a site

Do a Google search on water related websites and find an interesting activity to try – send in the link to emap@rsnz.org and tell us what you did/found.

4. Catch the drift

Make a drift net for your stream and see what kind of bugs are floating downstream.

For instructions go to www.wildaboutnz.co.nz

5. Overland flow

Ever wondered why streams get dirty when it rains? There are two main causes – stream bank erosion and water running over the ground and into the stream, picking up soil particles as it goes. If the soil is not covered with plants the effect can be even greater.

You can build a simple runoff collector to find out how much soil washes into your stream from the surrounding area.

For instructions go to www.wildaboutnz.co.nz

6. Recycling run-off

Extend the 'Overland flow' ideas and develop a system to make use of some of the excess fertilizer produced by farmed animals surrounding your stream.

Your system needs to include a method of gathering the raw material as well as a suitable way to make the best use of it.



7. Find a fish

Use a minnow net to capture, and then identify your captives!

Find out how to use a minnow net at

<http://www.wildaboutnz.co.nz/mainsite/Product.NativeFishCatcha.html> (and click on view instructions)

For fish ID go to <http://www.niwascience.co.nz/rc/freshwater/fishatlas/>

8. Pest Fish and Weeds

Go to <http://nwp.rsnz.org/newsletters/Newsletter12.pdf> for background information on pest fish and weeds. Then download pictures and facts from

<http://www.doc.govt.nz/templates/podcover.aspx?id=33406> or

<http://www.doc.govt.nz/templates/page.aspx?id=33504>

and make:

- A set of mix and match cards. Test your partner.
- A poster or cartoon strip displaying the threat of pest weeds and fish in your stream which also illustrates how to eradicate them if they are found

9. Pollution tell- tales

Use “pollution tell tales” to see if your stream is being affected by oily pollution from accidental spills (or deliberate discharges). This will help you to protect your local waterway from oily pollutants.

Find details on www.wildaboutnz.co.nz

10. Water stories

Talk to people who have lived in the area for a long time and find out how your waterway and surrounding area has changed. Share your information by combining it with photos to make a PowerPoint presentation, or tape or video the interviews. Your local library or museum may be interested in archiving your material.

11. EMAP Conservation News

Which schools have worked to restore and/or enhance their local stream?

Find the case studies in the newsletters and in the case studies section at

www.emap.rsnz.org and then make a similar restoration plan for your own stream. Have a go at writing your own case study to go online – it can be emailed to emap@rsnz.org.

12. Restore the Banks

Poor quality riparian habitat can cause many problems for stream life – for example high water temperature and excessive aquatic weed growth due to lack of shade, and bank erosion causing dirty water and loss of ‘hiding places’. Revegetating riparian zones can be an expensive process but you can make a useful start with seed balls. Follow the instructions at <http://nwp.rsnz.org/content/TheSeedBallMethod.doc>.

See how good (or bad) your stream margins are by checking the pictures at



<http://www.ecan.govt.nz/Our+Environment/Land/Living+Streams/Riparian+Guidelines.htm>

and the habitat assessment sheets at <http://www.waicare.org.nz/site/main/manual.aspx> (page 43)

13. Research farming effects

Research the effects that farming can have on a stream and produce a poster (see cows in creeks poster on <http://nwp.rsnz.org/newsletters/newsletter8.pdf>)

Secondary schools could use Environmental Watch Promoting Healthy Farm & Forest Streams – a set of 6 CD ROMs. Information & order forms available from <http://www.niwa.co.nz/edu/resources/envwatch>

14. Make a point of taking photos

Find out how important features of your stream are changing over time by setting up photopoints (see directions below). You may be interested in changes to stream banks at bends, the growth of plants beside the stream or seasonal aquatic weed growth.

Photopoint Monitoring: For photopoint monitoring, take a photo from a particular marked place by your stream, at the same time, using the same camera, same film every March and look for any differences. Advise your regional council if your monitoring reveals a significant problem. (NB: Make sure the main subject at each photopoint does not get obscured by leaf cover of deciduous trees, or the growth of trees and shrubs in the foreground).

15. Scientific Drawing

Do a scientific drawing of some aspect of your stream, eg, macroinvertebrates, plants, stream bed etc.

To do a scientific drawing follow these rules:

- 1 Use a sharp HB pencil
- 2 Your drawing should be large
- 3 Use definite lines not feathered
- 4 Include a scale

16. Creative Art

1. Create an artwork that reflects your stream, use texture, colour, shape etc to convey the different aspects of your stream.
2. Create your own 'superbug' that shows survival features your creature needs.
3. Create a jigsaw from a drawing or photo of your stream or a critter you found in it.

17. Newsflash

1. Imagine a disaster associated with your stream. What impact will it have on the people who live nearby?
2. Write a newspaper report to explain the impact of your disaster on the area.



- Check over 'Media Release' Activity 5 page 83 'Your Own Catchment Picture'

http://www.ew.govt.nz/forschools/teachers/classroomunits/documents/Rivers_yourCatchmentPic.pdf

- Refer to Auckland Regional Council's media writing guidelines With kind permission reproduced on the NWP website at <http://nwp.rsnz.org/content/WritingfortheMedia.doc>

18. Hinaki

For a picture of a hinaki (eel trap) go to

<http://www.maori.org.nz/slideshow/Category.asp?CategoryID=14>

Facts on eels and a method for making a hinaki are on

<http://www.suzy.co.nz/suzysworld/Factpage.asp?FactSheet=261>

This will give you ideas for making your own hinaki.

Or you can use this Word document http://nwp.rsnz.org/content/MMM_NgaTuna.doc to build your own hinaki.

19. Legend of the stream

Find out the legend of your local stream. If your stream does not have a legend now is the time for you to write one.

20. Board Game

Develop a board game that reinforces ways of maintaining the health of a stream and discourages behaviors that will have a detrimental effect on it.

See an example on:

http://nwp.rsnz.org/content/graphics/KH_boardgame.jpg

<http://nwp.rsnz.org/content/H2Ocards12.doc>

http://www.nelsoncitycouncil.co.nz/environment/environment_matters/game.htm

21. Debate

Have a debate to argue for and against a developer who wishes to redirect your stream so that she can subdivide the land and sell it for lifestyle sections.

<http://nwp.rsnz.org/content/Riverissues11.doc> provides notes to facilitate this debate.

Or, debate the issues for water quality in your area using Activity 7 from

http://www.ew.govt.nz/forschools/teachers/classroomunits/documents/Rivers_impactLandUseWater.pdf

22. Then & Now

Find out how the people who lived in your area in the past made use of this stream. Could they use it in the same way today? Would they? Why would its use be different? Make a chart that shows 'then' and 'now' activities with explanations to show the change process.