



# The Pacific Tradewinds Quarterly

## Welcome to SPaRCE

### Inside this issue:

Flood, Landslide Hit PNG	2
Cook Islands 16th in Tropical Rainforest	3
PNG Pushes the Environment Issue	4
Guam Museum Gets 100,000th Visitor	5
Pacific Meteorologists Train in Tahiti	6
Maui Bridge Builders Take Third	7
Kids' Corner	8-11
ENSO Update	12
Get to Know: Melissa Koeka	12

We're back! After a rather lengthy hiatus, the SPaRCE newsletter is back, and with a brand new look.

The past year was spent working out of Apia, Samoa, primarily with the Pacific Island Global Climate Observing System (PI-GCOS) program based at SPREP (Secretariat for the Pacific Regional Environmental Programme). Briefly, the Global Climate Observing System was established to ensure that the observations and information needed to address climate-related issues are obtained and made available to all potential users. More information can be found at the GCOS web site: <http://www.wmo.ch/web/gcos/gcoshome.html>. The PI-GCOS program has a new Program Manager at SPREP, Mr. Dean Solofa, and we are looking forward to continuing the relationship between the SPaRCE program and SPREP.

What is new with the SPaRCE program? We continue to work with any and all interested schools, communities, or individuals who want to learn more about the weather and climate of the tropical Pacific and making

meteorological measurements. We have also, during the past year, strengthened our ties with Pacific island meteorological services, and continue to urge all SPaRCE participants to be sure and send copies of their meteorological data to their local weather office. The funding for the SPaRCE program comes from the U.S. Global Climate Observing System Program Manager, at the National Oceanic and Atmospheric Administration.

We also have a new SPaRCE program coordinator, Ms. Melissa Koeka. You can read more about Melissa on the back page of this newsletter. We're very glad to have Melissa working with us here at the University of Oklahoma.

We hope you enjoy the new look to the newsletter. We are always happy to hear from SPaRCE participants, so if you have comments or questions please feel free to contact us.

Happy holidays to all!

-Susan Postawko



## Flood, Landslide Hit Papua New Guinea

**Monday, November 14, 2005**  
**By Yehiura Hriehwazi**

**"Nine houses have also been swept away by the Bulolo River..."** *The National*, November 15, 2005.

PORT MORESBY, PNG – The Eddie Creek Mine and the Kaindi people near Wau have been cut off from the outside world after heavy rain and floods caused landslips that blocked their only access road.

Nine houses have also been swept away by the Bulolo River but nobody has been reported missing.

Morobe administrator Mr. Manazupe Zurenuoc has organised for tarpaulins to be delivered to the affected people this morning.

Bulolo police commander Inspector Willy Gumain told *The National* along the Wau-Bulolo Highway yesterday that heavy rains and flooding caused extensive damages in many areas.

Police were moving around collecting information and doing assessments before reporting to headquarters.

Gumain said such heavy rains appear to have a 10-year cycle. It first occurred in 1985 and, in 1995 more devastating floods hit the area.

He said it was possible that the worst was yet to come and urged people living along the river banks and unstable geographical land areas to take extra precautions.

*The National* visited the affected areas yesterday and saw that a bridge across Snake River at Bangalum village near Bulolo was under threat of being washed away.

Half the approach to the Lae-end of the bridge has been washed away, but vehicles are still able to cross very slowly and with a lot of care.

A bridge across the Small River Wau was completely covered by rocks and gravel on Friday night with flood waters actually flowing over it.

Mr. Zurenuoc on Saturday issued instructions for a restoration team to commence work immediately and clear the bridge.

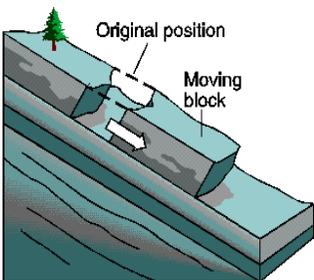
They were still at work yesterday with a bulldozer and a loader to allow people from areas like Wandumi, Piaru, Garaina and Waria to regain access into Wau and connect onto Lae. There are well over 30,000 people in that area.

At three sections of Pine Point along the Wau-Bulolo Highway, creeks and rivers burst their banks and were flowing along the road. PMVs from Wau could not travel to Lae on Saturday, leaving hundreds stranded in the city while many more could not travel to Wau from Bulolo.

A swinging footbridge across the Bulolo River for about 500 Buang villagers at Namba Eight was also destroyed by a huge uprooted rain tree.

Along many sections of the highway, numerous landslips and rock-falls were seen. Some parts have huge boulders strewn dangerously on the road.

The managing director of Eddie Creek Mine, Mr. Trevor Neal, is



**Slide: movement parallel to planes of weakness and occasionally parallel to slope.**

<http://www.em.gov.bc.ca/Mining/Geosurv/Suificial/landslid/ls2.html>



stuck in the mine site.

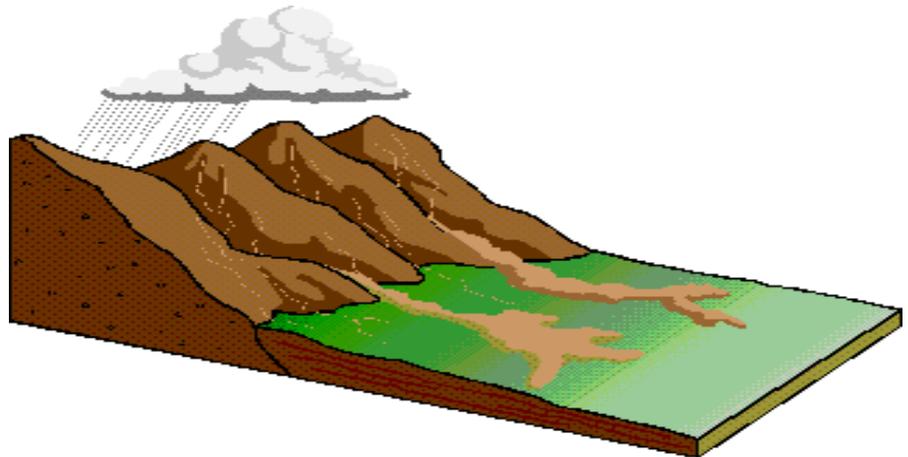
The medium-scale mechanized alluvial mine is adjacent to the Hidden Valley gold project. Mr. Neal's satellite communication links were also not working.

There could be close to 3,000 villagers in the Eddie Creek and Kaindi areas who were unable to have road access into Wau, according to police.

Tuesday, November 15, 2005

The National: <http://www.thenational.com.pg/>

Copyright © 2005 The National Online. All Rights Reserved.



**Torrent: A sporadic and sudden discharge of water and debris.**

<http://www.em.gov.bc.ca/Mining/Geolsurv/Surficial/landslid/ls2.html>

## Cook Islands 16th in Tropical Rainforests

**Thursday, November 17, 2005**

The Cook Islands have been ranked 16th among tropical countries with the highest natural rainforest cover.

The Food and Agriculture Organization of the United Nations (FAO) released its 2005 Global Forest Resources Assessment report on the state of the world's forest resources on Monday.

Each year about 13 million hectares of the world's forests are lost to deforestation, but the rate of net forest loss is slowing down, thanks to new planting and natural expansion of existing forests, says the FAO.

Figures released by the organization rank the Cooks 16th on the list of tropical countries with the highest forest cover as a percentage of total land cover. About

66.5 percent of the land cover of the Cook Islands is forest. Micronesia and American Samoa are ranked third and fourth out of all tropical countries.

The Cook Islands does not rank among the countries affected by deforestation, but countries in and around Asia are now losing their forests at the fastest rates.

Deforestation rates have fallen since the 1990-2000 period and forests now cover 30 percent of the world's land area. Leading causes of deforestation are industrial logging, clearing of forest for agriculture and forest fires. Central America loses 1.3 percent or about 285,000 hectares of its forest each year from deforestation.

— Helen Greig

Thursday, November 17, 2005

Cook Island News Online: <http://www.cinews.co.ck/>



**"About 66.5 percent of the land cover of Cook Islands is forest,"**  
Cook Island News Online, November 17, 2005.

## PNG Pushes the Environment Issue

**Monday, November 28, 2005**

The momentum on the debate on climate change has picked up around the world and Prime Minister, Sir Michael Somare, took advantage of the Commonwealth Heads of Government Meeting (CHOGM) to raise the issue.

In addressing leaders from over 50 countries around the world gathered for the biennial CHOGM at Malta over the weekend, Sir Michael said, "There is sufficient body of scientific knowledge to suggest that the increase in the incidence of diseases, drought, sea level rise, natural disasters and their attendant problems are very much related to climate change.

"Scientific predictions also indicate that Small States, many of which are members of the Commonwealth in the Pacific and the Caribbean and poorest countries in Africa and Asia will be hardest hit and therefore will be most affected by global warming," He said.

Sir Michael challenged the Commonwealth to take decisive actions to address global climate change and acknowledged the Prime Minister of Canada's statement indicating an opportunity to take concrete steps to arrest climate change and make a real difference to be at the forthcoming conference of the parties (COP) to the UN Framework Convention on Climate Change in Montreal later this year.

"I also note that the G8 has had discussion on this issue and have

made certain commitments. Among them is to develop markets for clean energy technologies and increase their availability in developing countries. This would obviously alleviate the high costs of oil to many developing countries."

He said he was also encouraged by the initiative taken on an Asia-Pacific Partnership on Clean Development and Climate.

"For my part, I have committed Papua New Guinea to secure an economic incentive to preserve rainforests as part of the United Nations Frame Work Convention on Climate Change.

"Since my announcement of this initiative in New York, my government has been working hard to put together a Coalition of Rainforest Nations to help advance this window of economic opportunity.

"I am pleased and proud to inform you that both the MSG and the Pacific Island Forum meetings held recently in Papua New Guinea, that Pacific Island countries supported the need to include rainforest carbon sequestration in any carbon trading mechanism of the post-Kyoto Protocol." He said.

"Despite initial resistance we are beginning to see acceptance of the idea of rainforests being discussed as part of the next phase of the Kyoto Protocol.

"At my government's request, an agenda item: Reducing Emissions from Deforestation in developing



**CHOGM calls for a reduction in emissions from deforestation in developing countries.**

[http://news.yahoo.com/s/nm/20051101/sc\\_nm/environment\\_disclosure\\_dc\\_1](http://news.yahoo.com/s/nm/20051101/sc_nm/environment_disclosure_dc_1)

**"I see this as an opportunity to reframe environmental sustainability in developing nations," Sir Michael Somare,**  
<http://www.pacificislands.cc/pina/pinadefault2.php?urlpinaid=18539>

nations has been included in the COP – 11 Agenda. I see this as an opportunity to reframe environmental sustainability in developing nations. My intention is not to take the pressure off fossil fuel emission reductions by industrialized nations and to provide a vibrant emission trading market that would offer sufficient incentives for developing nations towards the preservation of rainforests.

“As you are all aware, global economic forces provide many of us – developing countries – with difficult development choices. Regrettably, present incentives offered by international markets for agriculture, forestry and emissions reductions lead inevitably to deforestation, environmental degradation and further poverty.”

“As the custodian of a large part of the world’s third largest rain-

forest, the issue for me has been on how best to achieve sustainable development while maintaining a unique and irreplaceable biodiversity, as well as contributing effectively to global climate stability.

“As the magnitude of the climate challenge increases, we must put aside our political differences and parochial economic interests and work together to secure a stable future,” said Sir Michael

Monday, November 28, 2005.

PNS: <http://www.pacificislands.cc/pina/pinadefault2.php?urlpinaid=18539>



**CHOGM2005**

<http://www.chogm2005.mt/page.aspx?site=CHGM&page=chogm2005>

## Guam Museum Gets 100,000th Visitor

**Tuesday, November 29, 2005**  
**By Mar-Vic Cagurangan**

Hisao Uehara of Gunma, Japan walked into the Micronesia Mall gallery on Friday, marking the 100,000th guest to view the Guam Museum’s seven-month gallery exhibit. Uehara was greeted with gifts by Gov. Felix P. Camacho and representatives from the Department of Chamorro Affairs, the Guam Hotel and Restaurant Association and the Guam Visitors Bureau, when he came in at 1:30 p.m. He was accompanied by his wife, whose name was not available at

press time. The couple was staying at the LeoPalace Resort Guam. “This is a significant milestone for the museum as we see interest in our cultural heritage from residents and visitors alike grow,” Camacho said. Camacho said the administration will continue supporting the museum’s mission by getting the facilities and other resources needed to properly house centuries of Guam’s culture, art and history.

Variety News: <http://www.mvariety.com/>

“As the magnitude of the climate challenge increases, we must put aside our political differences...and work together to secure a stable future,” Sir Michael Somare,  
<http://www.pacificislands.cc/pina/pinadefault2.php?urlpinaid=18539>

“This is a significant milestone for the museum...,” Gov. Felix P. Camacho,  
<http://www.mvariety.com/>

## Pacific Meteorologists Train In Tahiti

**"It is the first time that this kind of training course has been done in the Pacific,"** Marie-Christine Laurent,  
www.tahitipresse.pf



**Meteo-France Training Facility, Papeete, Tahiti.**

Tahitipresse: [www.tahitipresse.pf](http://www.tahitipresse.pf)

**Friday, November 11, 2005**

PAPEETE, Tahiti – Meteorologists from five South Pacific countries will participate in a weeklong advanced training course from Météo-France in Tahiti from Nov. 14-18.

"It is the first time that this kind of training course has been done in the Pacific," said Marie-Christine Laurent, who is in charge of international relations at Météo-France in Tahiti. "Several countries are helping these small states, as well as the World Meteorological Organiza-



**Papeete, Tahiti.**

<http://www.pacific-promotion.com/QSNEN.html>

tion, in supplying them with material, but there's no training.

"It's a perennial problem," she said. "We deal with Africa and the Middle East, but we too often forget the Pacific and its needs."

The meteorologists coming to Tahiti are from the Cook Islands, Fiji, Kiribati, Tuvalu and Papua New Guinea. The training will involve management, maintenance and the organization of a meteorological network. One day will be devoted to a simulation of a breakdown in service involving meteorological tools on the Tuamotu atoll of Takaroa.

The participants will not end up feeling out of their element in Tahiti because French Polynesia basically has the same climatic and topographical conditions they are used to at home.

The program initiated by Météo France will cost 4.8 million French Pacific francs (US\$474,720/€40,224) and is being financially supported by Pacific Funds and the French meteorological service. The French High Commissioner's office in Papeete will provide its Beechcraft airplane to transport the participants to and from Takaroa.

Météo-France said it hopes this kind of initiative will be renewed in Tahiti and New Caledonia.

Tuesday, November 15, 2005

Tahitipresse: [www.tahitipresse.pf](http://www.tahitipresse.pf)

Copyright © 2005 Tahitipresse. All Rights Reserved

**"The meteorologists coming to Tahiti are from the Cook Islands, Fiji, Kiribati, Tuvalu and Papua New Guinea,"**

Tahitipresse:  
[www.tahitipresse.pf](http://www.tahitipresse.pf).

# Maui Bridge Builders take Third

Friday, November 25, 2005

HONOLULU – The "Pink Monkeys" of Kalama Intermediate School placed third in a popsicle stick bridge competition held at the University of Hawaii-Manoa earlier this month.

The Kalama team of 8th-graders Ruby Baricchi, Tiffany Riley and Kelsy Kapisi constructed a bridge that carried a load of 187.5 pounds at the event sponsored by the American Society of Civil Engineers and the University of Hawaii College of Engineering. The bridge from the top team, Kapolei Intermediate's "Kapolei Blue Flames," held 226 pounds.

The bridges were 2 feet long, at least 4 inches wide and no taller than 9 inches in height. Students could use no more than 700 popsicle sticks.

The teams not only built their bridges, they also had to present their designs to the judges. In doing so, students touched upon how they chose their bridge design, the most difficult part of construction and how they expected their bridge to handle the load, a news release about the event said.

"The hardest part about building the bridge was sorting through the popsicle sticks to make sure we got the good ones," said members of the Kalama team during the presentation. "There were a lot of bad sticks."

The ASCE and UH College of Engineering have been cosponsoring their event in conjunction with an



**Ruby Barrichi, Tiffany Riley, and Kelsy Kapisi**

<http://www.mauinews.com/story.aspx?id=14637>

Engineering Expo at the college for the last two years. "The college and ASCE hope that through activities like the Engineering Expo, more students will become interested in engineering," said the news release. "Engineers, especially civil engineers, are currently in high demand in Hawaii."

ASCE was founded in 1852 and boasts a membership of more than 130,000 civil engineers worldwide, 1,000 in the state.

The Maui News, November 25, 2005

<http://www.mauinews.com/story.aspx?id=14637>



**University of Hawaii**

<http://www.eng.hawaii.edu/>

"The hardest part about building the bridge was sorting through the popsicle sticks to make sure we got the good ones,"

Kalama Team,

<http://www.mauinews.com/story.aspx?id=14637>

"The ASCE and UH College of Engineering have been cosponsoring their event in conjunction with an Engineering Expo at the college for the last two years," The

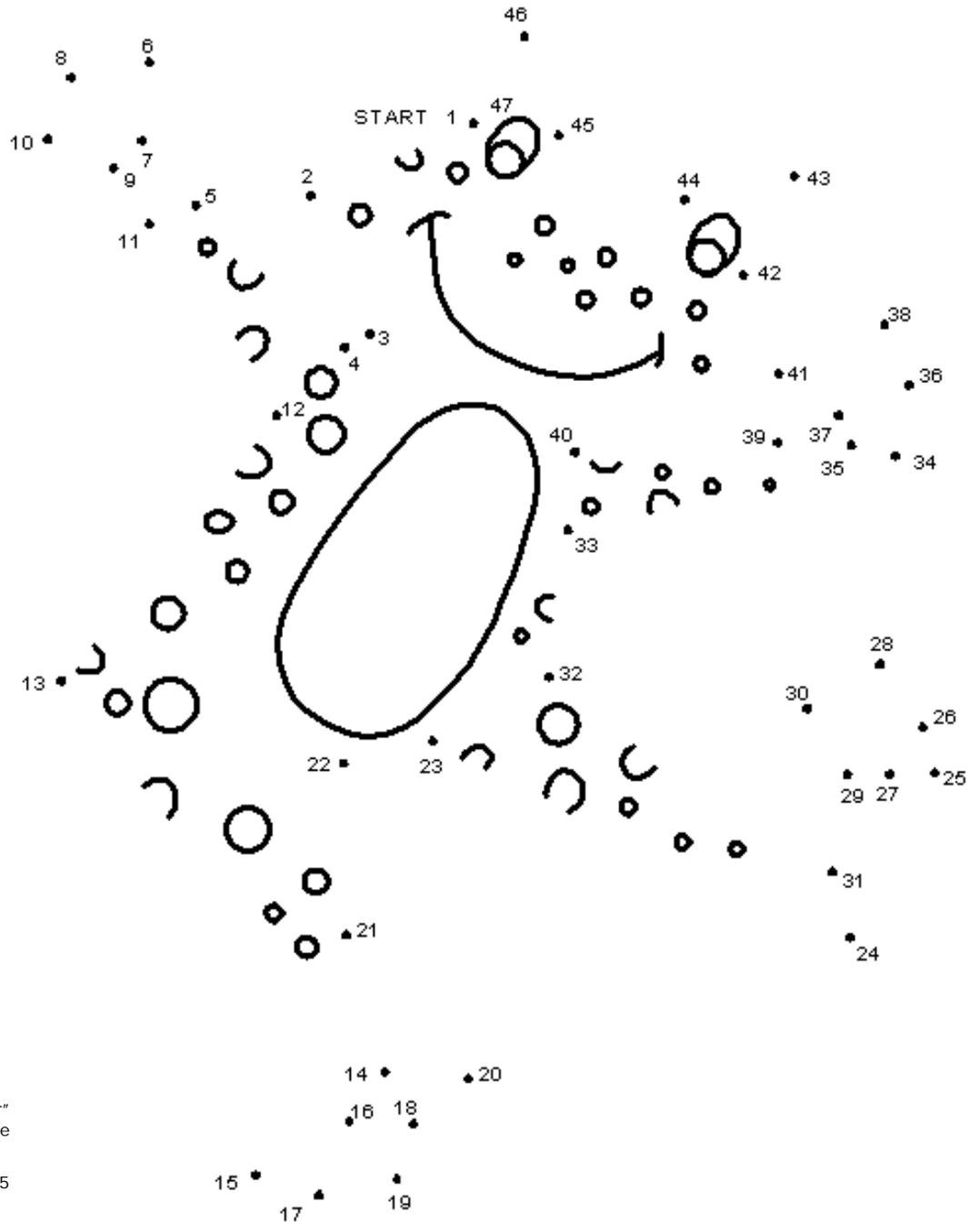
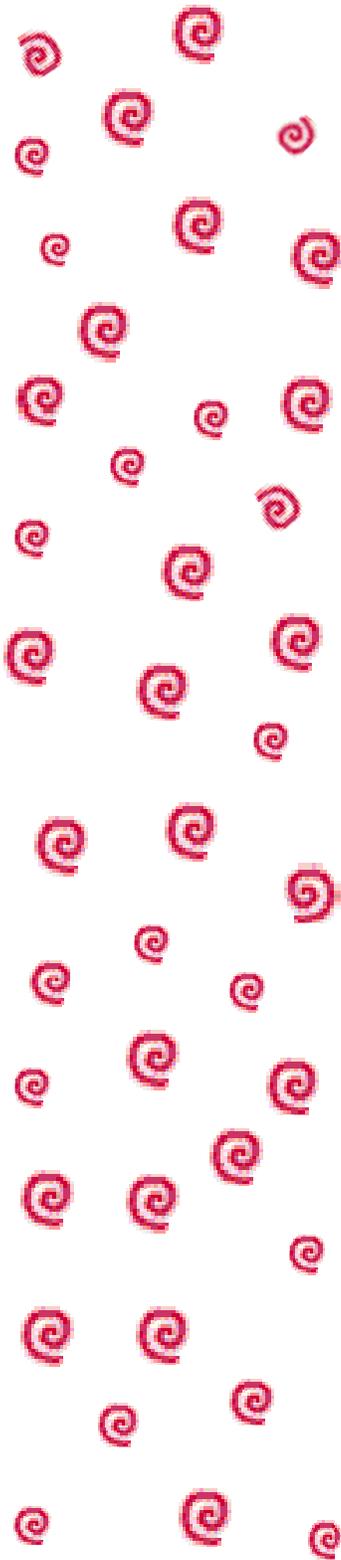
Maui News.

<http://www.mauinews.com/story.aspx?id=14637>

# Kids' Corner

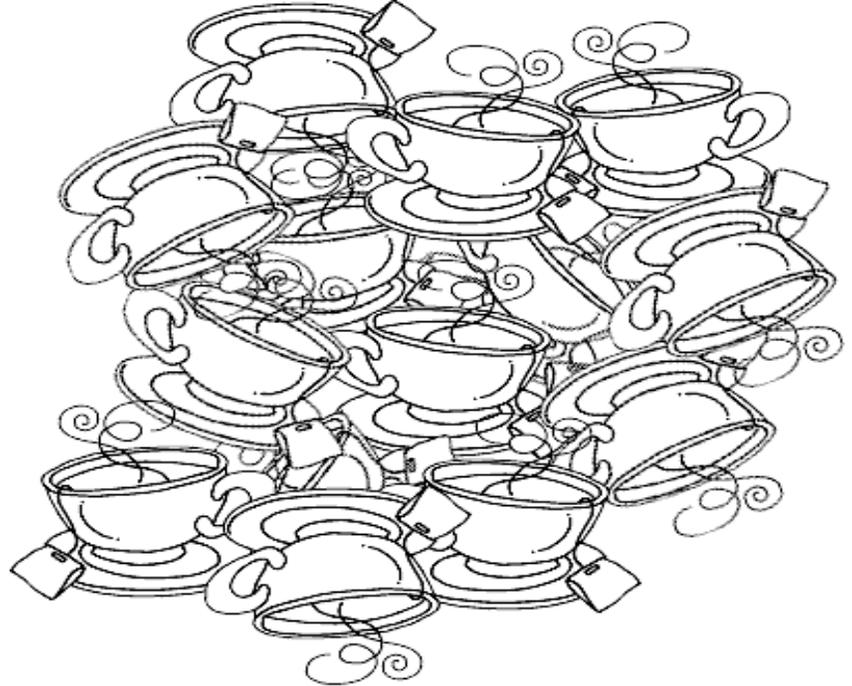
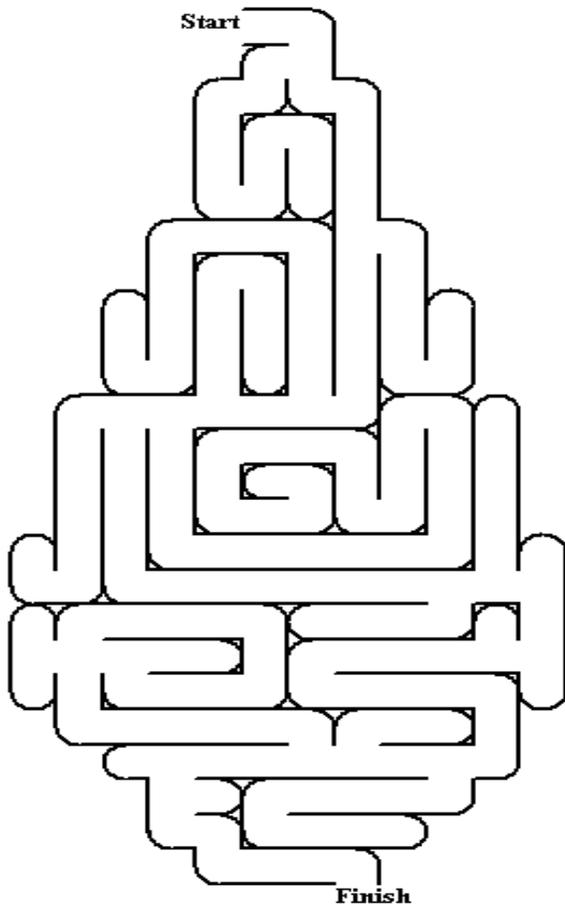
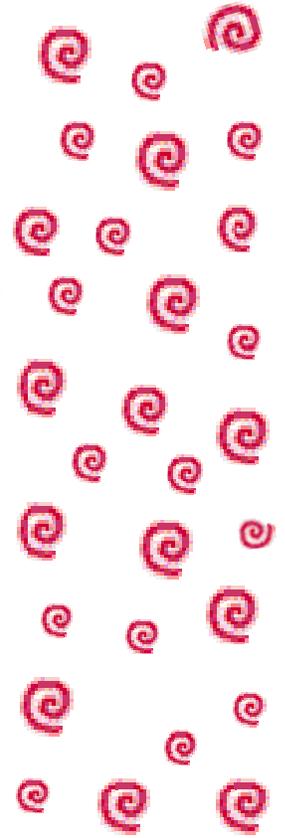
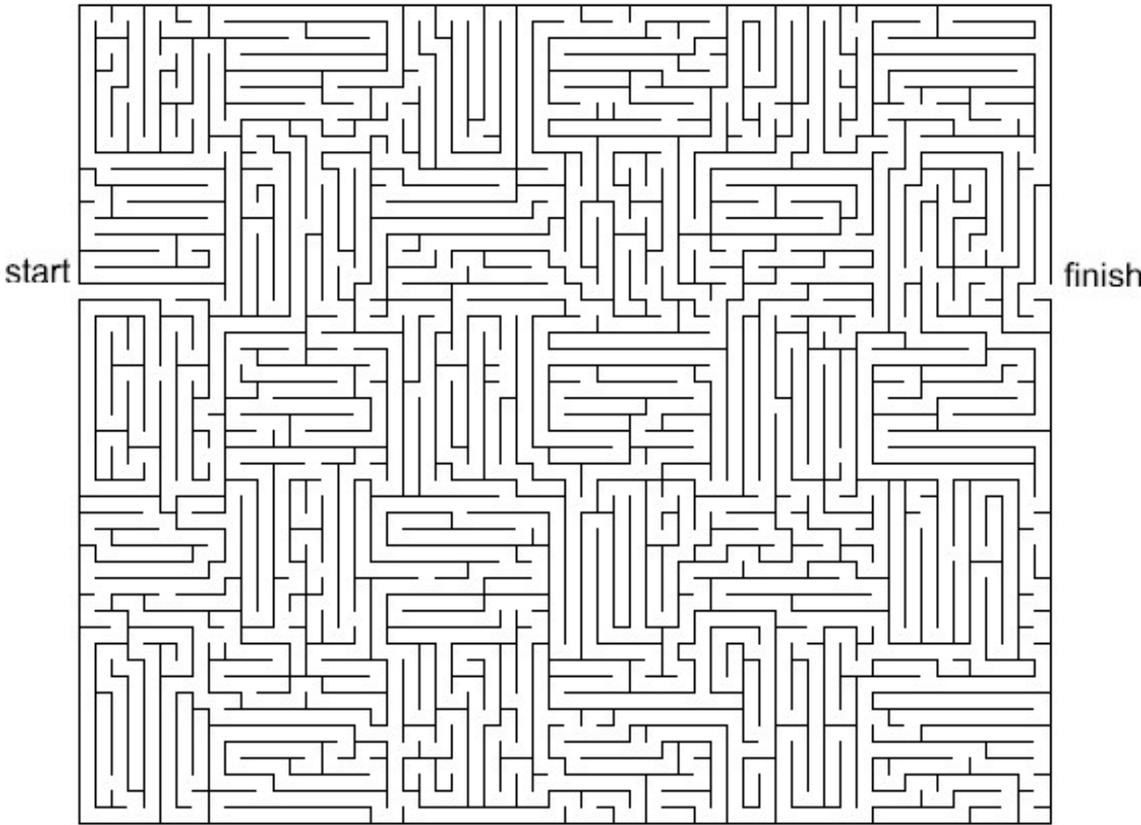
This is the student section of the newsletter. I've put together a few games, puzzles, and pictures to add to all of your learning enjoyment! Feel free to copy and pass them out. Every newsletter there will be new games, each one geared toward a different grade/level than the one before. Please feel free to send us your suggestions! Enjoy!

-Melissa Koeka



All games and puzzles in "Kids Corner" can be found on the kids printable website.

© Copyright 2002 - 2005 KidPrintables.com.



How many teacups are in this picture?

# FIND THE TWINS

WHICH TWO ARE EXACTLY ALIKE?



1



2



3



4

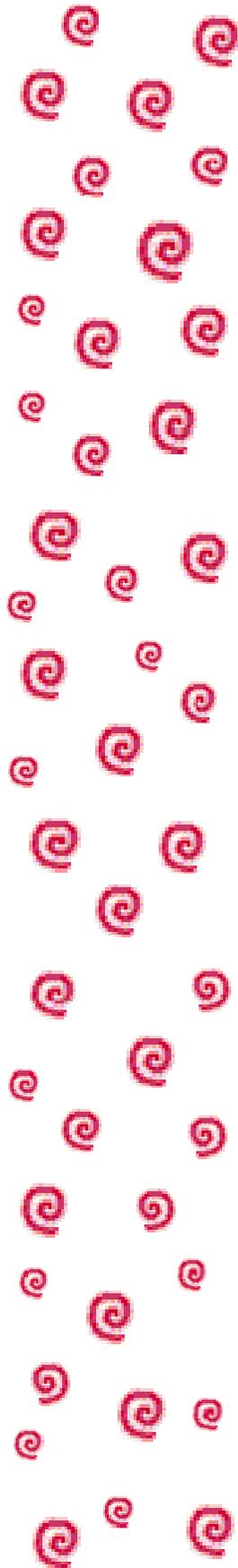
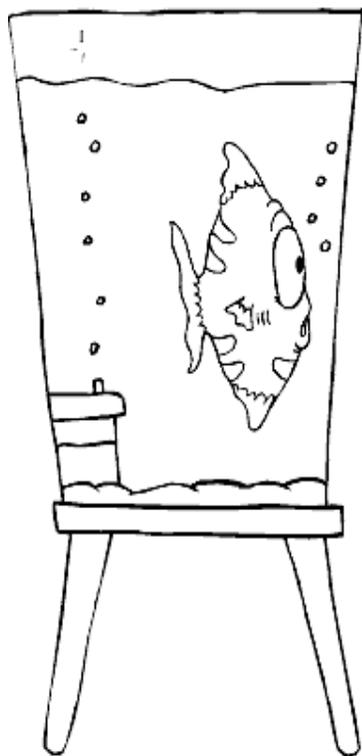


5



6

ANSWER: ONE AND THREE





WEATHER

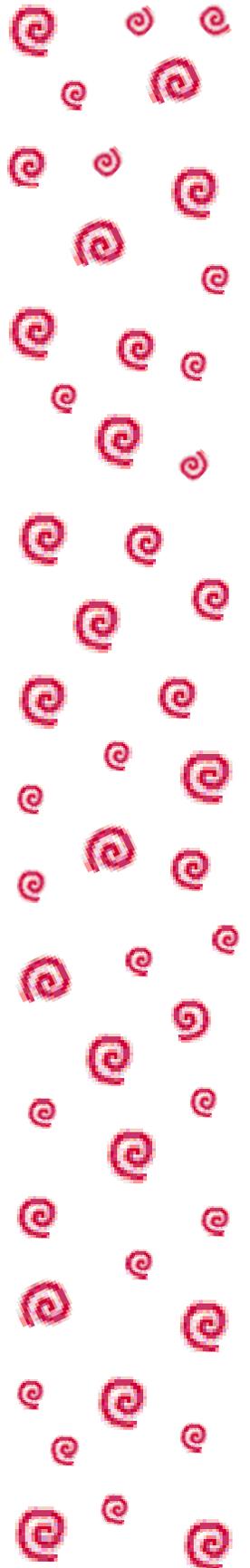
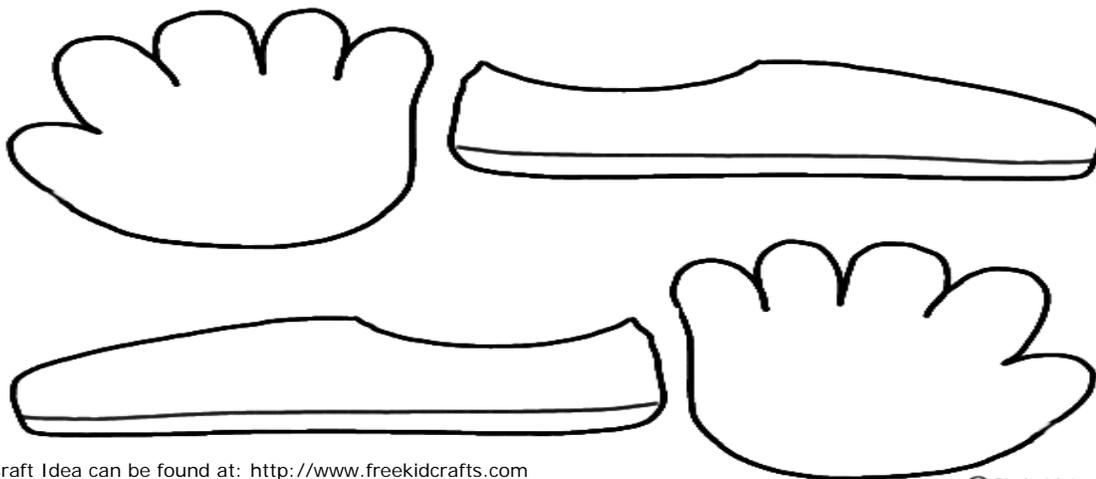
V V D S Q A O Z V S O T Q V  
 H K P R T I G O N N H S K D  
 V G B A A V Q O X U T A G S  
 T H M M G Z W H N C E C R S  
 N Y L Y B B Z D F A P R A K  
 J L T Y Z G E I P L O E I P  
 I H N Y E R F H L D O V N F  
 E N I H S N U S A B D O L P  
 U E B T U C O N I C H A D C  
 O Q O B W U R X U N Q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

See if you can find these words in the puzzle:

- BLIZZARD
- TORNADO
- SUNSHINE
- HAIL
- CLOUDS
- FLOOD
- SNOW
- OVERCAST
- RAIN
- THUNDERSTORM

# Heart Man

1. Cut a very large heart out of pink construction paper.
2. Cut out four strips of pink paper that are about one inch wide and 11-12 inches long.
3. Cut out two hands and two feet, using the template below.
4. Take each of your strips of paper and fold them like an accordian so that when they are folded they are about an inch square. These are the heart man's arms and legs.
5. Glue them into the right spot on the heart, which is the head and body of the heart man. Now glue the hands and feet onto the ends of the "funny" arms and legs. Draw a face onto your heart man.



## SPARCE HEADQUARTERS

EVAC  
3200 Marshall Ave. Suite 150  
Norman, OK 73072-8032  
USA

Phone: 1.405.447.8412  
Fax: 1.405.447.8455  
E-mail: [sparce@hoth.gcn.ou.edu](mailto:sparce@hoth.gcn.ou.edu)  
[spostawk@ou.edu](mailto:spostawk@ou.edu)  
[mmorriss@ou.edu](mailto:mmorriss@ou.edu)  
[koekabug@ou.edu](mailto:koekabug@ou.edu)

### WE'RE ON THE WEB!

<http://www.evac.ou.edu/>



## ENSO Diagnostic Discussion

**Thursday, December 8, 2005**-The current synopsis reads: "neutral or weak La Nina conditions are likely during the next 6-9 months," Climate Prediction Center. Current discussion reads: "The spread of the most recent statistical and coupled model forecasts indicate some uncertainty in the outlooks. However, current conditions (stronger-than-average easterly winds over the central equatorial Pacific) and recent observed trends (decreasing SST anomalies throughout the central and eastern equatorial Pacific) do not support the development of El Nino. Rather, they support either a continuation of ENSO-neutral conditions or the development of weak La Nina conditions," Climate Prediction Center.

Climate Prediction Center  
[http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory/index.html](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/index.html)

## Get to Know: Melissa Koeka



**A rare picture of the three of us together. (left: Greg, Me, Doug)**



**My dog Lola. She's a Shih Tzu and is 6 months old.**

**Thursday, December 8, 2005**

Greetings! My name is Melissa Koeka, and I'm the SPaRCE correspondent. I have to start by telling you about my family. They are great people and a lot of fun. My parents, Gary and Mary, live in Strongsville, Ohio (where I grew up) with their dog Kokie. My youngest brother, Doug (19), lives there as well and is an automotive technician. I have one more brother, Greg (24), who is graduating from the University of Colorado with a degree in finance. I am looking very forward to seeing them again at Christmas. Now a little bit about me. I am 23 years old and a sophomore in Meteorology at the University of Oklahoma. I originally attended CU with my brother but had to follow my passion for meteorology. I transferred in 2002 and LOVE it, especially extreme



**Koeka Family: (from the left) Greg, Mary, Me, Doug, and Gary**

weather. Eventually, I would like to live in Colorado again and research cold weather phenomena. Currently, I live in Norman, Oklahoma with my puppy Lola. She is quite a little character and entertains me daily. I read Calvin & Hobbes comics for fun and watch my Cleveland Browns attempt to win a game, with hopes that one day we might make it to the playoffs. I'm sure this will find all of you after the holidays, so I wish you a wonderful new year.