

# Project MICRO in Vermont : An Opportunity for Core Facility Outreach



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## Background

After a 1999 presentation of a joint Microscopy Society of America / UC-Berkeley Lawrence Hall of Science program – “Project MICRO” (Microscopy in Curriculum – Research Outreach), members of the New England Society for Microscopy (NESM) assembled 3 program “kits” and distributed them to NESM members for use in local schools. A kit was brought back to Vermont to “try out”, and 9 years later, we are still using the **seeds** of that original kit, having exposed over 4000 children and hundreds of adults to the **wonders** of the microscopic world, hopefully encouraging them to further explore their own scientific worlds.



## School Contact Strategies

Brochure  
Poster  
Children of UVM Staff  
“Word-of-Mouth”



## Kit Contents

**Book** – *Microscopic Explorations – GEMS* ISBN: 0-924886-00-5  
5 Compound Student Microscopes  
5 Monocular Dissecting Microscopes  
10 Pocket Microscopes  
30 Hand Lenses or Eye Loupes  
Materials for 10 Learning Stations (common items)  
Notebook with Materials to Photocopy

## Volunteers:

MIC Staff – Director & Technicians  
Students – Medical, Graduate & Undergraduate, Work-Study  
UVM Staff – Office Personnel & Technicians from Other Labs  
Parents of Students at Festivals  
Alumni of Past Project MICRO Festivals

## Extra Equipment (nice to utilize)

Microscope Camera (VideoFlex 7600)  
TV / AV monitor  
Laptop Computer  
World Map  
Identification Books  
(Insects, Pond Life, Flowers & Plants)  
Extra Microscopes - Compound and Dissecting



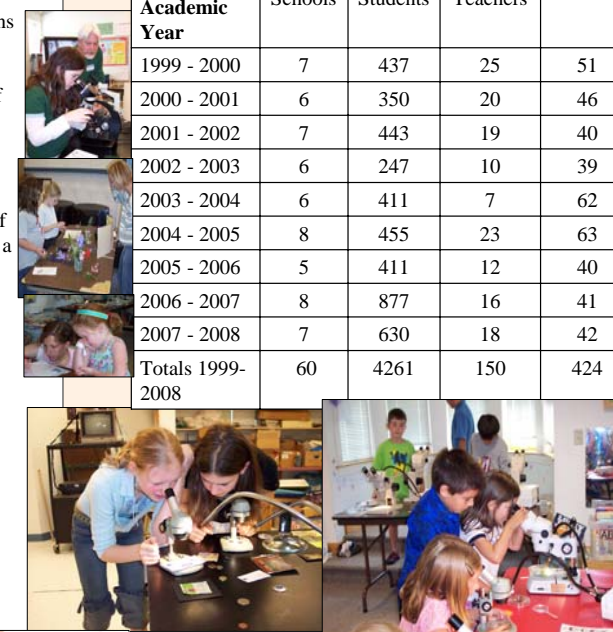
## 10 Learning Stations

- Up Close** – Construct water drop magnifiers and investigate properties of magnifying lenses.
- Fingerprint Ridges** – “Lift” impressions of fingerprints; find details of ridge patterns.
- Dots and Dollars** – Examine a range of imaging and printing techniques; determine how images are formed.
- Fabrics** – Observe a variety of fabrics; determine how each is made.
- Salts** – Observe and compare crystals of various salts; identify a salt involved in a make-believe highway spill.
- Sand** – Compare sand samples from several geographic locations.
- Flower Power** – Study flowers and leaves; compare and contrast shapes, textures, and colors
- Small Creatures** – Study structures of dried insects, spiders, isopods and more.
- Brine Shrimp** – Observe live brine shrimp; compare appearance, specific structures and movement patterns of adults, larvae and eggs.
- Pond Life** – Compare animal and plant life found in a pond.



## Total Project MICRO Festivals 1999 - 2008

Academic Year	# of Schools	# of Students	# of Teachers	Parents
1999 - 2000	7	437	25	51
2000 - 2001	6	350	20	46
2001 - 2002	7	443	19	40
2002 - 2003	6	247	10	39
2003 - 2004	6	411	7	62
2004 - 2005	8	455	23	63
2005 - 2006	5	411	12	40
2006 - 2007	8	877	16	41
2007 - 2008	7	630	18	42
Totals 1999-2008	60	4261	150	424



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## For further information:

UVM Microscopy Imaging Center  
802/656-0813  
UVM - Project MICRO  
<http://www.med.uvm.edu/microscopyimaging>  
Microscopy Society of America  
<http://microscopy.org/ProjectMICRO>

