

Wildland Fire Science: Teaching with the FireWorks Trunk

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Credit available: 1 University of Montana credit or 16 credits from MT Office of Public Instruction

Dates: Thursday morning through Friday afternoon, June 18-19, 2015, 8 am to 4:30 pm each day

Location: Missoula Fire Sciences Lab, 5775 W. Highway 10, Missoula, MT

Overview: Wildland fires in recent years have brought the ecology of fire in the West to national and international attention. Bring the complex, interdisciplinary science of wildland fire to students and other teachers by learning how to use the *FireWorks* educational trunk and curriculum and complementary material from *FireWorks for the Pikunii (Blackfeet) Nation*. This course contains 2 full days of hands-on classroom and laboratory learning, as well as discussions and lectures by fire researchers and educators. Content focuses on a variety of ecosystems to demonstrate diversity in fire regimes, fire behavior, adaptations to fire, successional patterns, and fire management choices.

Objectives:

1. Increase understanding of science in wildland fire-- behavior, history, effects, and management
2. Increase skill in teaching an interdisciplinary subject using hands-on materials
3. Increase skill in organizing and presenting an educational program to peers

Information in this box applies only to participants receiving “continuing education” credit for the course through the University of Montana. Enrollment will be offered the first day of the class.

Assessment:

1. Pre-work: Prepare presentation and costume/mask to depict life history and fire ecology of assigned organism.
2. Prepare and present assigned organism to class and participate in teaching one lesson.
3. Teach a lesson from *FireWorks* to students, teachers, or members of the public; assess learning; and write a report describing the process. In the report, describe (1) preparation, (2) implementation, and (3) assessment, and (4) critique the process. Documentation through photographs, videotape, or other media is encouraged.
4. For graduate credit: (1) Develop a test covering the material taught, (2) administer and grade the test, (3) critique it and make improvements, and (4) submit a written report accompanied by both versions of the test (electronic form encouraged).

Reports for UM credit are due by Aug 15, 2015. If you are unable to complete the teaching portion of your project before then, contact the instructor to arrange for an “N” grade and plan to complete it by Nov. 1, 2015. Evaluation: A=Fulfills assignments completely. Shows creativity and initiative, captures insights about teaching process in final report. B=Fulfills assignments completely, showing creativity and initiative. C=Fulfills assignments completely. D-F=Assignments missing or incomplete.

Materials/readings:

Smith, Jane Kapler; McMurray, Nancy E. 2000. *FireWorks* curriculum featuring ponderosa, lodgepole, and whitebark pine forests. Gen. Tech. Rep. RMRS-GTR-65. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 270 p.

Smith, Jane Kapler; McMurray, Nancy E.; Weatherwax, Marvin; Augare, Helen. 2009. *FireWorks* for the Pikunii Nation, Teacher Guide. Final report. Missoula, MT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory. 45 p.

Selections from the *FireWorks Notebook* in *FireWorks* materials

A very optimistic schedule for...

Thursday 6/18		pages	
8:00	Introductions, objectives		Jane & All
8:20	FireWorks-- why? ... & Navigating the Curriculum	1-14+	Jane
8:50	Visiting Wildland Fire	15-25	Greg
9:05	Stations:		Ilana
	1. Recipe for a Lodgepole Pine Forest	127-135	
	2. Tree Skin	120-126	
	3. Puzzling It Out	162-165	
	4. You Decide	190-194	
9:15	---BREAK & Stations---		
9:25	---Species Sponsors---		

9:45	<i>What's a community?</i>	70-73	Jane
10:00	<i>Tree Portrait, Plant Portrait</i>	74-78	Jane
10:15	<i>Mystery Trees I</i>	79-85	Ilana
10:40	---BREAK & Stations---		
10:50	---Species Sponsors---		
11:10	<i>Mystery Trees II</i>	85-86	Ilana, Jane
11:30	---LUNCH---Reconvene in Conference Room		
12:00	FireWorks for the Pikunii Nation	DVD – Marvin Weatherwax, Blackfeet Elder	
13:00	---Species Sponsors---		
13:20	---BREAK---Meet in Burn Chamber		
13:30	<i>Fire Lab, Fire/Lab Safety</i>	27-35	Jane
13:45	<i>Testing the Fire Triangle</i>	36-42	Jane
14:20	<i>Fire Triangle in Wildlands 1</i>	43-48	LaWen,
14:55	<i>Tinker Tree Derby</i>	62-68	Ilana
15:25	---BREAK---Return to Conference Room		
15:35	---Species Sponsors---		
15:55	<i>Buried Treasures-- activity</i>	113-115	Ilana
16:10	Presentation: How do plants come back after fire?		
16:25	Close-out		All

Friday 6/19

Start	Content	pages	
8:00	---Species Sponsors---		
8:20	Fire Regimes in Lodgepole Pine Forests		Helen
9:10	---BREAK & Stations		
9:20	---Species Sponsors---		
9:40	Tree Stories & Repeating the Story	90-107	Jane, Ilana
10:40	---BREAK and move to Burn Chamber		
10:55	Bucket Brigade	49-52	Greg
11:40	More on Fuels		Greg, Jane
12:15	---LUNCH---		
12:45	--- Species Sponsors---		
13:05	Assignments & prepare presentations		Ilana
	1. Dead or Alive Tree Model	109-112	
	2. Great Escape	140-142	
	3. Story Time (in lodgepole pine)	157-161	
	4. Always Changing (in whitebark pine)	150-157	
13:30	Presentation 1: Dead or Alive tree model	109-112	Class!
13:45	Presentation 2: Great Escape	140-142	Class!
14:00	Presentation 3: "Story Time"... in Lodgepole pine	157-161	Class!
14:15	Presentation 4: "Always Changing" in Whitebark Pine	150-157	Class!
14:30	---BREAK---		
14:40	---Last Species Sponsors---		
14:55	Houses in the Woods	170-175	Jane
15:10	Smoke: In or Out?	181-189	Faith Ann
15:30	---BREAK---		
15:40	Trunk organization, availability, care & feeding		Jane, Ilana
15:50	Scavenger Hunt: Valuable prizes will be awarded		
16:05	Close-out		All
16:30	ALL DONE!!!!		