

Packing Up and Adding Up

Grade Level: 4th Grade

Topic: Social Studies, Mathematics

Resources Needed:

- Image from the Center for Digital Initiatives Long Trail Collection: “Clarence P. Cowles on Stark Mountain”
<http://cdi.uvm.edu/collections/item/hwccr03b02017>
- Early 1900s Long Trail Hiking Supply List (can be found in the University of Vermont Special Collections)
- Current Long Trail Hiking Supply List, including weights
<http://sectionhiker.com/long-trail-gear-list/>
- Pencils
- Thought Journals
- Math Journals
- Clip boards

Student Learning Objectives:

1. Student will learn about what people needed to pack for a Long Trail hike in the early 1900s vs. what they need to pack for a Long Trail hike today.
2. Students will continue to learn about adding decimals.

Assessment of Stated Objectives: See Attached Rubric

Standards:

Vermont Grade Level Expectations

Subject: Mathematics

Grade: Grade 4

Standard/GE Stem: Standard 7.6: Arithmetic, Number, and Operation Concepts

Expectation: M4: 4 Accurately solves problems involving multiple operations on whole numbers or the use of the properties of factors and multiples; and addition or subtraction of decimals and positive proper fractions with like denominators.

(Multiplication limited to 2 digits by 2 digits, and division limited to 1-digit divisors.)

Procedures:

Introduction (7-10 mins):

- a. The previous day was dedicated to introducing decimals and addition of fractions. Students completed a worksheet to test their skills and understanding. Students will begin by reviewing this worksheet to refresh their memory.

- b. Copies of the image “Clarence P. Cowles on Stark Mountain” (in the “Resources” section) are passed around for all students. Students take 1 minute to silently observe the photo. Students take 2 minutes to record in their Thought Journals their ideas about what they see in the photo and what they can infer about the photograph. Students share ideas in a group or with the class for 2 minutes.

- c. Introduce the lesson and the exploration of what hikers brought with them on the Long Trail back in the early 1900s (when this photo was taken) and what hikers bring with them today.

Body (20-23 mins):

- a. Packing lists, both past and present, are handed out (attached). Students work in small groups (2-3 students) and write in their Thought Journals the similarities and differences between the historic and the modern-day packing lists.
- b. Each group gets 1-2 categories (i.e. “Hygiene” or “Shelter/Sleep System”). Groups work together to add up the total weight in ounces they would need for their category(ies), both past and present (this part should take no longer than 15-20 minutes).

Closure (10 mins):

- a. Students come back together with their weight amounts and the add up the totals together as a class to calculate the final pack-weight “then and now,” in ounces.
- b. The instructor converts this number to pounds.
- c. The class discusses the similarities and differences students noted in their Thought Journals as well as the weight differences of the gear used hiking in the early 1900s and hiking now.
- d. The class finishes with a discussion of how important decimals are in our everyday life. If a hiker didn’t know the exact weight of everything in their backpack, the pack could end up much, much heavier than anticipated.

Time Allotment: 1 class period of 40 minutes per class

Lesson plan created by Danielle E. Hall-Potvin 5/5/2014 as part of the University of Vermont Education Class: EDEL 157 – Social Education and Social Studies

RUBRIC AND WORKSHEET ATTACHED BELOW

“Packing Up and Adding Up” Rubric

Student Learning Objective	Assessment of Stated Objective	Not There Yet	Getting There	You’ve Got It!	Additional Comment
1) Student will learn about what people needed to pack for the Long Trail hikes in the early 1900s vs. what they need to pack for the Long Trail today.	1) Student will be able to explain the similarities and differences between what hikers packed for their Long Trail hikes in the early 1900s vs. today.	Student is unable to explain any similarities or differences between the packing lists of the early 1900s and present-day.	Student is able to explain some similarities and differences between the packing lists of the early 1900s and present-day.	Student is able to explain most of the similarities and differences between the packing lists of the early 1900s and present-day and offers some explanation as to why these differences and similarities exist.	
2) Students will learn more about adding decimals.	2) Student will be able to add several decimal numbers together accurately.	Student is unable to add any decimal numbers together	Student attempts to add decimal numbers together, makes a few minor addition errors but understands the concepts behind the process.	Student is able to add multiple decimal numbers together without error and with confidence.	

“Packing Up and Adding Up” Gear List	
Backpack	
Gossamer Gear Mariposa Plus	21.5 oz.
Gossamer Gear 1/3 NightLight	1.1 oz.
Gossamer Gear Medium Hip Pocket	0.7 oz.
Mountain Laurel Designs Medium Pack Cover	2.0 oz.
Gossamer Gear Internal Pack Liner	1.7 oz.
Skunklight Skylight-Solar Powered LED	0.6 oz.
Mini REI Thermometer	0.3 oz.
Shelter & Sleep System	
2 Easton Stakes	0.6 oz.
Sea-to Summit 13L Waterproof Stuff Sack	1.1 oz.
REI Kilo 20 Down Sleeping Bag	28.7 oz.
Medium Wool Socks for Sleeping	2.6 oz.
Patagonia Capilene 1 Bottoms	5.8 oz.
Patagonia Capilene 1 Crew	6.0 oz.
Hennessy Hammock Ultralite Assembly	22.7 oz.
Hennessy Hammock Tarp	8.2 oz.
Hennessy Hammock Undershield (Optional)	9.0 oz.
Hennessy Hammock Overshield (Optional)	3.0 oz.
Hydration	
3 L Platypus Bladder	1.4 oz.
3 L Platypus Bladder	1.4 oz.
General Ecology First Need Water Filter/Purifier	15.9 oz.
Platypus Hose and Camelback Bite Valve	2.1 oz.
Kitchen	
MLD Bear Bag System (Bag, Rope, Rock Sack, Carabineer)	3.1 oz.
OPSACK Odor Barrier Bag	1.1 oz.
Outdoor Research Helium Stove Stuff Sack	0.5 oz.
Snow Peak 700 Titanium Pot and Lid	4.2 oz.
Snow Peak Gigapower Titanium Stove in Plastic Case	3.8 oz.
Toob Tooth Brush/ Paste (Full)	1.3 oz.
Long Handled Titanium Spoon	0.4 oz.
MSR Pack Towel	0.7 oz.
Head Net Ditty Bag	
Maps	1.3 oz.
Black Polypro Glove Liners	1.2 oz.
Mountain Hardware Polypro Hat	0.8 oz.
Bandana	0.8 oz.
Outdoor Research Windproof Balaclava	2.3 oz.
Extra Clothing	
Cocoon Polarguard Pullover Vest with Helium Ditty Bag	6.4 oz.
Mountain Hardware Cohesion Rain Pant	10.00 oz.
Navigation	
Id/Cash/Coinage/Credit/Health Ins-Omniseal Ziploc	0.9 oz.
Suunto a10 Compass	0.9 oz.

Digital Camera	5.8 oz.
Brunton LED Lantern	3.0 oz.
Green Equinox Essential Bag	
Prescriptions/Nalgene Bottle (5 Days)	0.5 oz.
2-Pair Macs Ear Plugs in Snack Bag	0.1 oz.
Small Dental Floss	0.4 oz.
Photon Freedom LED Light With Hat Clip	0.7 oz.
Swiss Army Classic Knife	0.7 oz.
Grey Ditty Bag (Murphy)	
Gear Repair	3.8 oz.
First Aid/Emergency Kit	4.8 oz.
Hygiene	
Small Bottle Purell Hand Sanatizer	1.4 oz.
Small Bottle Dr. Bronner's Soap	0.9 oz.
Ben's 100% DEET	1.25 oz.
Base Pack: Weight In Pounds	12.5 lbs.