

ACTIVITY I

Weigh Too Much

Texas Essential Knowledge and Skills: 3.1A, C; 3.7E; 4.1A, C; 4.8C; 5.1A, C; 5.3A; 6.8A, B; 6.13B

Objective: Students will estimate the weights and masses of items that will be packed for a vacation. The objective is to select items that come closest to the specified weight limit without going over.

Number of students: Students will work in groups of four.

Materials:

- Scale that measures pounds
- Scale that measures ounces
- Balance that measures grams
- Balance that measures kilograms
- Measurement Conversion Chart
- Recording sheet
- Items that would be used on a camping trip
 - Sleeping bags
 - Snack foods with the weights on the labels covered
 - Toiletries (toothbrush, toothpaste, comb/brush, blow dryer, curling irons, soap, shampoo, etc.)
 - Backpacks
 - Luggage
 - Books and magazines
 - Clothes
 - Electronics (Walkmans, DVDs/CDs, video games, etc.)
 - Other objects appropriate for vacationing

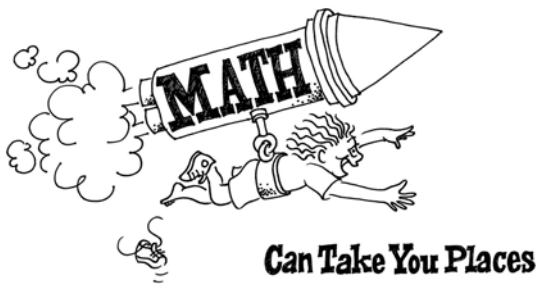
Steps:

Step 1: Your group is going on a camping trip. Your assignment is to select the necessary items that you will pack for the trip.

Step 2: Your group cannot pack more than 18 pounds per person, or a maximum of 72 pounds.

Step 3: You will start by weighing one object, such a tube of toothpaste. Write down the mass or weight.

Step 4: Select other objects and estimate the mass or weight using your original object as a point of reference. Each person in your group can hold each object in order to help estimate the weight. **Do not weigh the other objects your group has selected at this point.**



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Step 5: Once you have selected all of the objects for your group's trip, your teacher will tell you the actual weights and masses of the items on your list. Record that information. The group closest to the goal weight wins.

Step 6: Students will write a summarization of this activity, explaining why they selected certain items, how much they were off in their estimates, what they learned from this experience and how they can use this experience to help estimate weights and masses in the real world.

Extensions/Modifications:

- For real-world application, have students brainstorm different situations in travel where the weight of objects matters. For example, the weight of the luggage on a plane determines how high it can fly, etc.
- Allow students to weigh their own objects or weigh them as a class once the groups have chosen their items and written down their estimated mass.