



# Dinosaur Expedition: Time to Pack The Truck!!!

## Directions:

You and your expedition team (there are 16 of you total) must pack four expedition trucks, in which each truck will carry 4 team members on a 5-month (150 day) expedition.

## You must take into account 5 important packing rules:

1. You cannot pack more than the carrying capacity of the truck (or the truck will get stuck in desert sand).
2. You cannot overload the roof rack (or it will collapse and cause an accident).
3. You cannot put people on the roof rack (they could fall off).
4. You must pack the truck emergency kit near the rear door (in an emergency, the tire-jack and flashlight must be accessible).
5. You must bring enough food for each person each day in the field.

Carrying capacity of your truck and other weight information are listed below. Use this information to answer the questions.

### Weight limitations

Truck carrying capacity (for 1 truck)	4000 pounds
Roof rack carrying capacity (for 1 truck)	200 pounds

### Weight of a team member and personal supplies

Body weight of 1 person	150 pounds
Baggage for 1 person	100 pounds
Tent for 1 person	20 pounds
1 day of food for 1 person	5 pounds

### Weight of equipment

Jackhammer (only need one (optional))	400 pounds
Excavation tools (for each set, need 4 sets total)	150 pounds
4 filled gas cans (for each truck)	200 pounds
Truck emergency kit (for each truck)	20 pounds
Medical kit (for each truck)	20 pounds

The only optional piece of equipment for the expedition is the jackhammer, which might help if the rock around a fossil is very hard. All the other equipment items are essential to bring (excavation tools, extra gas, and special kits).

**QUESTION:** What is the weight of 1 team member with his/her baggage, a tent, and enough food to last the 5-month expedition?

**ACTIVITY:** Sketch the passengers and the items that you will bring on the plan for the inside of the truck (cabin) and for the roof rack. Make sure you have not violated any of the 5 packing rules.

**QUESTION:** Can you bring the jackhammer, or is it too heavy when all other supplies essential to the survival of the team are packed?

**QUESTION:** The fieldwork is over and your team has discovered many heavy fossils. You know that it takes 5 days to return home from the field. If our trucks return from the field with the team and all of the personal gear and equipment that were originally packed, what is the maximum weight of the fossils that your truck could bring home? (*Hint: think about what resources are used before you head back....*)