

Drink Up, Baby!

ACTIVITY: Measure or count quantity of milk a calf drinks daily

GRADE LEVEL(S): *K-12th



varies (15-30 minutes average)

OVERVIEW: Students discover how much milk a gray whale calf drinks every day. Compare and contrast how much they drink to a calf and different liquid measurements.

DISCIPLINES: Science, math, visual arts

OBJECTIVES: Students will be able to:

- Discuss the diet of newborn calves
- Practice counting skills
- Recognize the quantity of milk a calf drinks
- Recognize a gallon and/or liter as liquid measurement
- Identify and discuss the diet of a whale calf

MATERIALS: • *Gallon/liter drink containers (rinsed and dried, **contained child-safe, non-toxic products**)
You'll need up to: 50 gallons or 189 1-liter or 94.5 2-liter containers

- Crayons
- Pencils
- *Drink Up, Baby! Counting and Color Sheet* (1 per student)
- Calculators (for older students)
- *You may also want to have plastic glasses or clean empty lunch milk cartons, to use in comparisons and discussion.

WHAT TO DO:

Background: A newborn gray whale calf is about 15 ft (4.6 m) long and weighs 1,100 lb (500 kg). The calf nurses milk from the mother. A calf drinks about 50 gallons (189 l) of milk every day! The mother's milk is 53% fat. The rich milk helps the calf grow fast and build a thick layer of blubber. The calf nurses between 6 and 8 months. By that time, the calf is about 27 ft (8 m) long and weighs 15,000 lb (6,800 kg).

Prep: To give kids an idea of just how much milk a calf drinks every day, collect 50 gallon, 1-liter or 2-liter containers. Collect clean gallon and/or liter drink containers.

How much milk does a gray whale calf drink a day?

Hold up one container. Questions you might ask to start the activity: *How much milk does this hold?* (gallon, pint, liter...etc.) *How much milk do you drink a day? Does a gray whale calf drink more or less than you? (Why?) How much milk do you think a gray whale calf drinks a day.* Use the containers to help with the discussion. Have kids count out the number of gallons they think a calf drinks.

Then, if you have enough (gallon jugs, for example) as a group, count out all 50. Then explain that that is the quantity of milk a calf drink in a day.

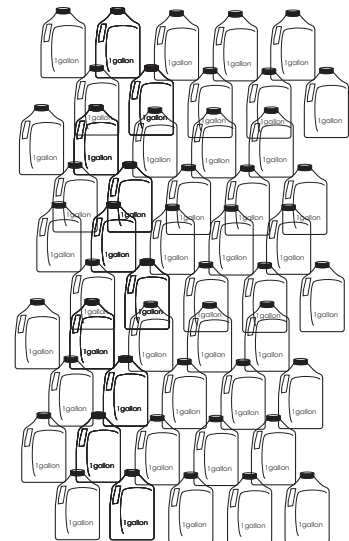
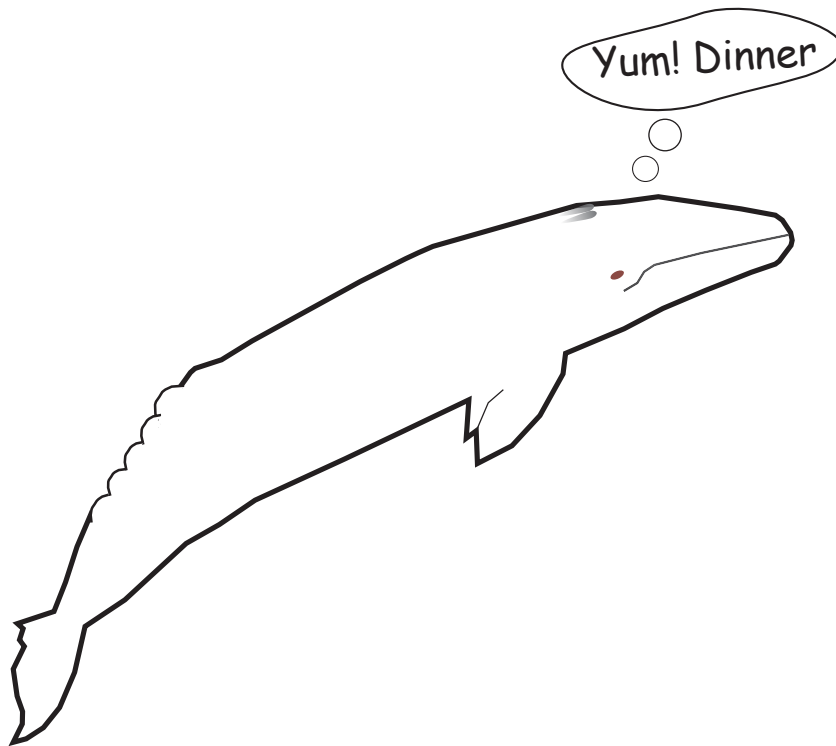
Compare and contrast and discuss that amount to how much one student drinks, the entire class, or even the entire school.

There are many ways to use or expand on this activity. Kids can practice estimation, measuring skills, fractions, even graphing. Below are just a few ideas.

- Mathematically figure out the total amount of milk a calf drinks before it is weaned. (50 gallons a day for 6 to 8 months). Compare that to the quantity a student drinks during the same time.
- Compare and contrast standard and metric liquid measurements. Physically compare amount, for example, 50 gallons equals 94.5 2-liter containers.
- Have students mathematically convert standard measurements to metric or metric to standard.
- Compare and discuss the fat content of whale milk (53%) to the milk people drink. Ask, “Why do you think a calf needs such rich (fat) milk?”
- Create a graph to compare and contrast the fat content of whale milk (53%) to the milk people drink, half/half and cream.

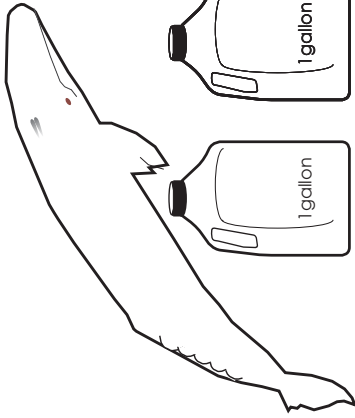
Different ways to use the Drink Up Baby Counting and Color Sheet:

- Color the page.
- Practice counting by 1s, 5s, or 10s.
- Practice writing numbers by counting and writing each number on jug.
- Practice multiplication (10 across by 5 down).
- Determine how much milk a calf drinks in a week by counting, adding, multiplying the total number of gallons on 7 color sheets.



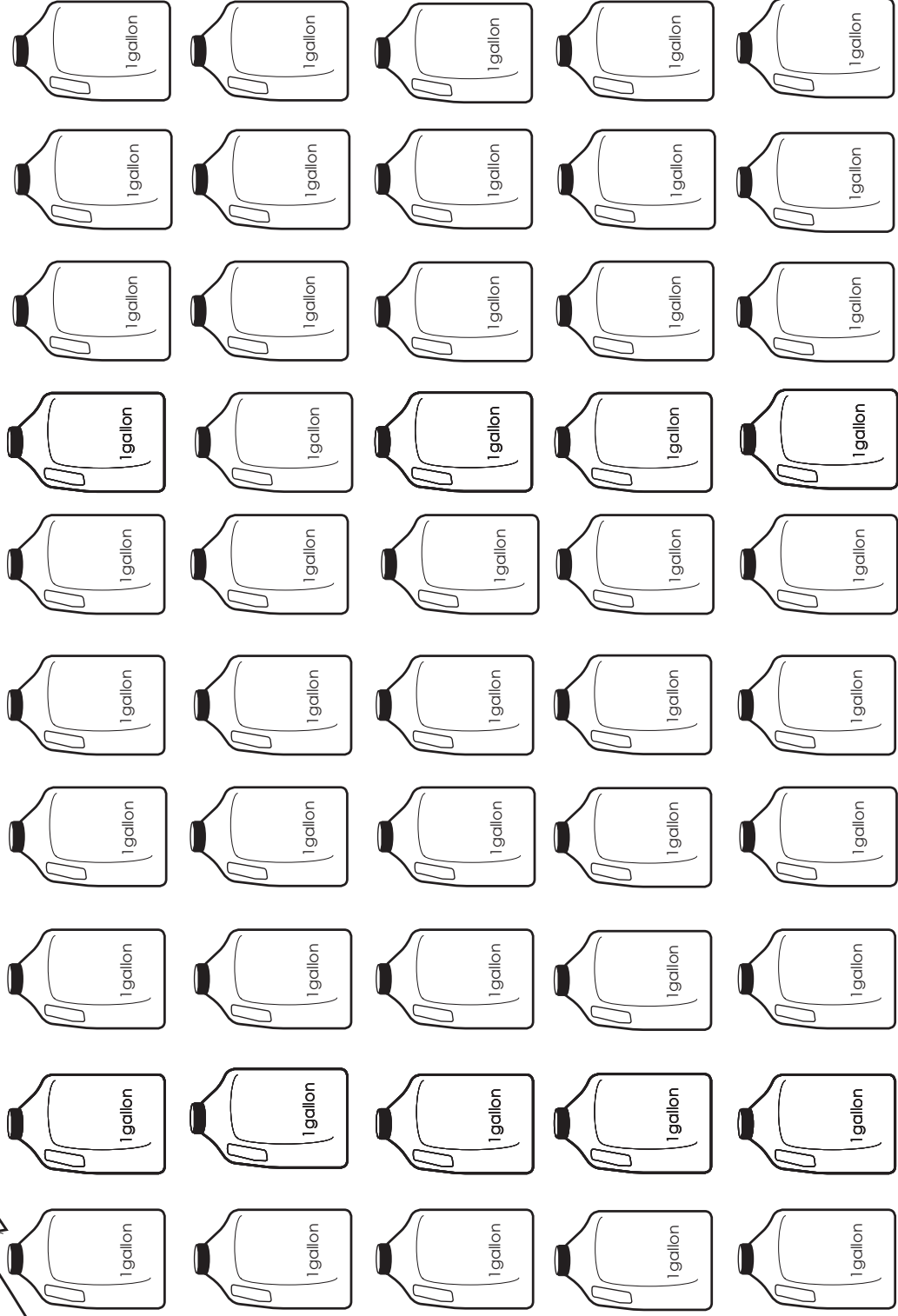
Drink Up, Baby!

Counting and Color Sheet



How many gallons of milk does a gray whale calf drink every day? This many!

How many gallons can you count? _____



WhaleTimes Virtual Team Member Activity
Celebration of Conservation: Gray Whales

A calf stops drinking milk when it is 6 to 8 months old. Then it has to find its own food (amphipods).