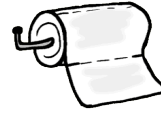


## How Much Do You Use?

### Measure Your Monthly Use of Basic Household Items



#### Materials Needed

- Toilet paper
- Toothpaste
- Soap
- Pen or Pencil
- A ruler or measuring cup

#### Grade Range

K-8

#### Topics/Skills

Science: Observation,  
Prediction, Classification  
Conservation

#### Learning Standards

NGSS: [Earth Systems](#); [Earth and Human Activity](#)

#### Duration

5 minutes daily for 7 days

#### Prep Time

2-3 minutes

Have you ever wondered how much toothpaste, toilet paper, or electricity your family uses each week? This is your chance to find out. Choose several commonly used items around your home such as toilet paper, rice, water, and soap. Measure how much of the items you have and track the rate at which they are used.

#### Activity Challenge

Choose 2-3 household items to track for seven days then predict how much you will need in a month.

#### Preparation

1. Think about the items you use daily at home.
2. Make a list of the items you will be tracking for a week.
3. Focus on things you can count or measure easily such as eggs, milk (glasses consumed), cereal (bowls eaten), etc.
4. Remember that you will be measuring how much of each selected item you use each day for seven days.

#### To Do

1. Find items to be measured and tracked.
2. Measure the amount of the item by length or volume. For example, if tracking paper towels, measure across the middle of the roll (diameter), either end. If measuring toothpaste that is already being used, roll the tube from the bottom up (with the cap on) and measure its length.
3. Make a chart to keep track of daily measurements (see last page for example).
4. Note measurements for each item each day.
5. Repeat steps 1-3 for 7 days.
6. Add the total amount, for each item, and make a prediction about how much of the tracked item will be used in a month.

#### Observations

Measure and track the use of each item daily. Sketching or graphing is encouraged.

#### Extensions

- Calculate the costs of tracked items and create a monthly budget.
- List some ways to reduce your usage of 1-2 non-edible tracked items.

**The Science behind the Activity**

Animals and plants do many things that can affect the environments in which they live. For example, tree roots can affect the amount of soil that can be held on a sloped hillside. Squirrels and gophers change terrain by digging up dirt to make their burrows, which can cause rainwater to pool in different ways. Humans also have a profound impact on the environment, both positive and negative. We often clear away natural habitats to make way for housing and commercial comforts but we also build structures and derive other solutions to help mitigate the effects on the environment. This activity provides a simple way for people to understand their own consumption of common items and think about how to change personal behaviors. In doing so, students learn to understand their role as part of a larger system and that they can make positive changes based on measurable evidence collected in school and at home.

**Table: Sample Household inventory Tracker**

		Day of Week						
		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Item	Paper Towels	10 inches across	8 inches across	7 inches across	6 ½ inches across	6 inches across	4 inches across	3 ¾ inches across
	Rice (bag)	10 inches long	8 inches long	8 inches long	8 inches long	6 inches long	6 inches long	4 inches long
	Eggs	12	9	8	5	1	0	0
	Toothpaste (tube)	8 inches long	7 ¾ inches long	7 ¾ inches long	6 ½ inches long	6 inches long	5 ½ inches long	5 inches long
	Cereal	1 bowl	2 bowls	1 bowl	1 bowl	1 bowl	2 bowls	2 bowls

**Interpreting the data**

- Eggs.
  - Used a dozen (12) eggs every five days. About how many would be used in 1 month?
- Cereal.
  - Ate 10 bowls a week. How many bowls would be eaten in a month?
- Toothpaste.
  - Used about 3 inches of a tube every week. If a new tube of toothpaste is about 10 inches long, how many tubes would be used in a month?