

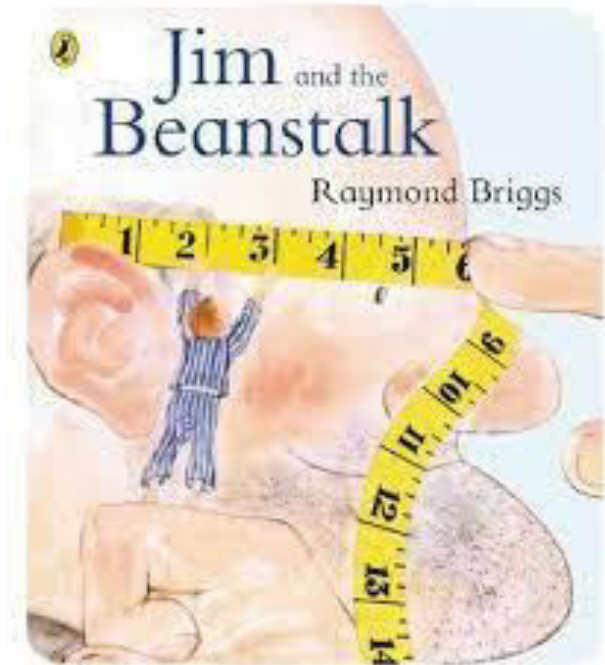
# Fractions on a Line Plot

Module 4  
Session 1

# Today's Activities

- Apply some concepts we've learned over the past few weeks as you participate in a special three day project which involves art, literature, measurement, fractions, and data analysis.

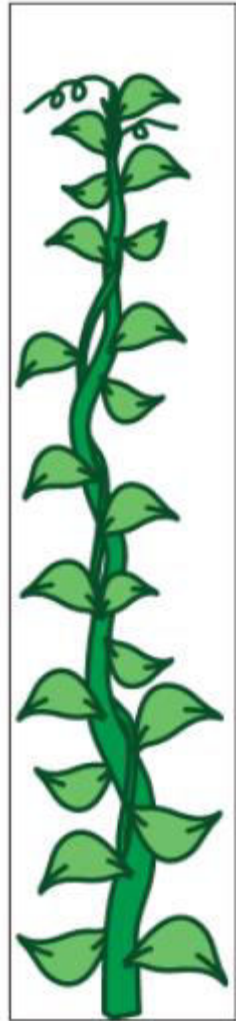
# Jim and the Beanstalk



# Creating & Measuring Beanstalks

Today you will be creating your own beanstalk with a partner. Once you are done, you will measure the beanstalks in both inches and centimeters. Finally, you will create line plots to display all the data you have collected.

What do you notice about this beanstalk?



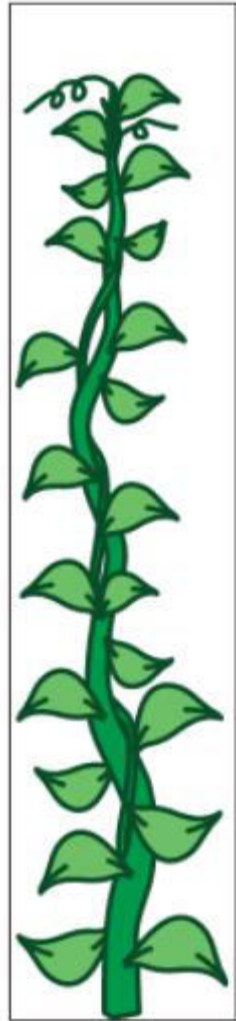
# Creating & Measuring Beanstalks

## To create your beanstalk, you will need

- 1 strip of white paper
- green and red crayons and markers

## Directions

- 1** Use a green marker, draw a long green beanstalk in the middle and along the length of the paper strip.
  - Make it thinner at the top of the stem and thicker at the bottom.
  - Add a curling vine at the top if you like.
- 2** Draw large and small leaves along both sides of the stalk with your green marker. Add veins to the leaves if you like.
- 3** Color in your beanstalk with a green crayon.
- 4** Write your name and your partner's in the bottom corner.



# Creating & Measuring Beanstalks

## To measure your beanstalk, you will need

- a measuring tape and a ruler, if you like

## Directions

- 1 Estimate first, then measure!
- 2 Use the measuring tape to measure the height of the whole beanstalk, from top to bottom, to the nearest  $\frac{1}{2}$  inch.
- 3 Record the lengths on your paper next to the items.
- 4 **CHALLENGE** Use the measuring tape, or a ruler if you prefer, to measure each leaf from tip to stem to the nearest  $\frac{1}{4}$  inch.



# Creating & Measuring Beanstalks

Estimate the height of my beanstalk.

What are the lowest and highest estimates we've made?



# Creating & Measuring Beanstalks

Now we will use the measuring tape to measure the height of the beanstalk from the top to the bottom. We want to measure to the nearest half-inch.

We can use our experiences with rounding to help us.

It's very common to find that measurements don't come out perfectly. In order to help us be precise, we can measure to fractions of an inch instead of to whole inches.





# Creating & Measuring Beanstalks

Which leaf on my beanstalk is the shortest?  
Estimate its length. Measure the length of the leaf  
from tip to stem, working to the nearest quarter  
inch.

People often measure to smaller fractions of an inch when they are measuring shorter lengths and want to be precise. Make sure to align the leaf with the “0” at the end of the ruler.

When measuring to the nearest quarter of an inch, there are three different marks which can be used.

$\frac{1}{4}$

$\frac{1}{2}$

$\frac{3}{4}$

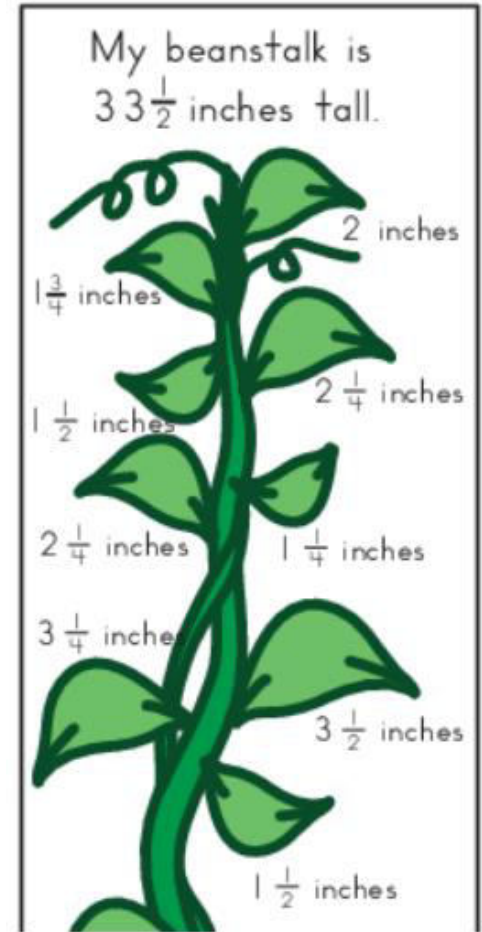
Record the measurement next to the leaf.  
Repeat this process with a few more leaves.



# Creating & Measuring Beanstalks

Now it's your turn! Work with your partner to estimate, measure, and record the length of the stalk to the **nearest  $\frac{1}{2}$  inch** and every leaf to the **nearest  $\frac{1}{4}$  inch**.

You can use a ruler or a measuring tape to measure the length of the leaves. You do NOT need to record your estimates.



# Closing

Clean up your supplies and hand in your beanstalks to be used next session.

# Optional

Complete Mass, Volume & Length Review on page 137 in your student book.