Teaching STEM through Fairy Tales

Jack and the Beanstalk

The Challenge

Students are challenged to design and build the tallest beanstalk that will support the most weight.

The Criteria

- Beanstalks will be made out of provided supplies.
- Beanstalks must be topped with at least half of the provided paper plate.

The Constraints

- The beanstalk must be freestanding
- The beanstalk must not be anchored or taped to any surface.
- Beanstalks will be tested using the following formula:

$$Score = 3h + 2b$$

Where h is the height of the beanstalk in inches and b is the number of books that the beanstalk supports for 30 seconds

The Materials

- ❑ Styrofoam Plates (one per team)
- ❑ Masking Tape
- ❑ Newspaper (6 sheets per team)
- ❑ Books (or other weights of uniform size and shape)

Think of Ideas: How do we solve the problem?

Find a Solution:
Which idea will work best?

Design:
 How will we design and build it?

Test and Evaluate: How do we know we solved the problem? What can be improved?

Share your Success!