


Guiding Questions

What is an engineer?

What is technology?



- **Do you know someone who is an engineer?**
 - **If so, what kind of work does that person do?**
 - **Do you think that a shoe is considered technology? Why or why not?**
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**My house is full of technologies
and I have brought some to
share today.**



**Are you surprised that this is
technology? Why or why not?**



Directions: Once every group has a mystery bag, open the bag, pass the object around, and examine it.

Then record your findings on the sheet titled *Technology Around Us*



- **Is the object natural or human-made?**
- **What material(s) is it made of?**
- **What problem does it solve?**
- **How else could you use it?**
- **What other materials could it be made of?**



Who do you think creates these technologies?



For the next hour, you will be engineers and will design a technology to solve problems.




**I would like to set a mascot
outside the classroom that will
help students know which
classroom is Mrs. Johnson's.**

What is the problem?



**I need you to solve this
problem. What questions do
you have before you start?**



- **Each group will get 50 index cards and 1 foot of tape.**
 - **Each group can use the scissors and ruler as tools, but they may NOT be used as a part of the tower**
 - **Towers must be at least 8 inches tall**
 - **Towers need to hold up the mascot for at least 10 seconds**
 - **Groups will have 20 minutes to design towers**
 - **Students can hold the mascot briefly, but they may not test their towers with it until the 20 minutes are up**
 - **Groups may not tape their towers to their desks**
 - **Groups don't need to decorate their towers at this point**
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**Let's brainstorm different ways
you can build using the index
cards.**



- 1. Explain your design to the class.**
- 2. What part of your design do you think will work well?**
- 3. What do you predict will happen when you test your design?**



How do you think you could improve your design if you had more time?

Why do you think that idea will improve your design?



**What do you think the word
'process' means?**

**What are some examples of a
process?**

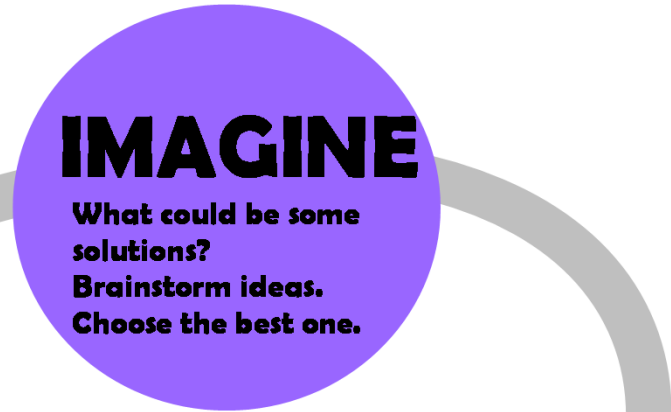
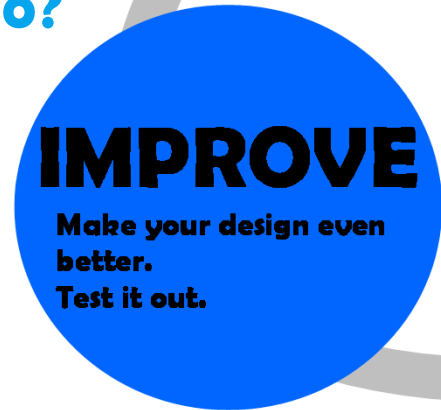
**Do you think you used a process
to help you design the tower?**

Why?



Do you think you used any of these steps when you designed your tower?

Why do you think so?



**THE
ENGINEERING
DESIGN
PROCESS**



**Do you think your engineered
today? How do you know?**

So what does an engineer do?

