

MAGNA-TILES® LESSON PLAN #9:
Imagination + 3 Little Pigs + Magna-Tiles® = A Fun STEM Activity

STEM Integrations:

Science: Is the house with more Magna-Tiles® sturdier than one made with straws or one made with sticks? Why?

Technology: Take pictures of each house with a digital camera or an iPad.

Engineering: Build a sturdy house.

Math: Count how many sticks, straws or Magna-Tiles® are used to build each house.

Materials:

- The book, “The Three Little Pigs” or a read-aloud video on YouTube like this one: <https://www.youtube.com/watch?v=HtHjB6rRmQc>
- 1 Magna-Tiles® set
- Popsicle sticks
- Straws
- A small fan
- Digital camera or iPad

Directions:

#1. Read the story, “The Three Little Pigs” to the students (or have them watch a read-aloud video on YouTube).

#2. Discuss with the students what imagination is and how the little pigs used their imagination to build their houses.

#3. Tell the students that today they will be able to use their imaginations to build houses just like the little pigs did. Then you are going to use a fan to see which house(s) can be blown down.

#4. Divide the students into three groups or six groups, depending on how many students you have.



#5. Give one group of students the straws, one group of students the popsicle sticks and another group of students the MagnaTiles®. (There will be two groups that have straws, popsicle sticks and MagnaTiles® if you have six groups of students.)

#6. Instruct each group of students to use their imaginations to build a house for the three little pigs with their materials.

#7. After the students are finished, have them count how many straws were used to build a house, how many popsicle sticks were used and how many MagnaTiles® were used. Discuss with the students if they think that the number of materials used to build each house will determine if it will be able to be blown over or not. (ie. If more of a material is used, will it cause the house not to be blown down?)

#8. Tell the students that you are going to try to blow each house down with the small fan. Discuss with the students which house(s) they think will not be blown over with the fan. Discuss why they think this.

#9. Using the small fan, try to blow over each house. Discuss which house was sturdier and why.

#10. Place the materials (ie. straws, popsicle sticks, MagnaTiles®) at a center so that each student is able to experiment with building a house.

Extension: Have the students take pictures of their house creations and write sentences describing their houses. This can be accomplished by printing out a picture of the student's house and putting that at the top of the writing paper. This can also be accomplished by allowing the students to type their sentences and placing the picture of the house at the top of their Word document. This can be saved and emailed to parents or printed out to display in the classroom.

