



PUMPKIN DROP



Objective: Students will use critical thinking, creative thinking, and problem solving skills to design a pumpkin holder to protect a pumpkin dropped from the roof of the school to the ground below.

Requirements: All students in the 4th-6th grades are invited to submit a design proposal by completing the attached Pumpkin Drop Packet which includes thinking skills activities. Students may work alone or with other students, but help from adults should be minimal.

The pumpkin must be at least the size of a soccer ball. The pumpkin, along with the holder, should be able to be carried by one student without help and able to be wrapped in a tarp to be pulled up on the roof. Please keep the safety of participants & observers in mind at all times.

Dates: Pumpkin Drop packets should be completed and turned in to Mrs. Hutchens by Thursday, October 24. The top 20 design proposals will then be chosen and announced by Friday, October 25.

The Pumpkin Drop will take place at 9:00 am on Thursday, October 31. Parents are welcome to come and watch.

Materials: Recyclable materials that are appropriate for school. You may **NOT** use whole boxes, coolers, styrofoam, packing peanuts, bubble wrap, or pillows. You may **NOT** use tape to enclose the outside of the pumpkin. Again, you may only use items that have been used and would be thrown away. **Again, NO whole boxes, coolers, styrofoam, packing peanuts, bubble wrap, or pillows are allowed.** Be creative and flexible with your thinking.

Email Mrs. Kim Hutchens if you have any questions
at hutchensk@mtnbrook.k12.al.us.



Name(s) _____

Teacher _____ Grade Level _____

*Remember the work in this packet is what determines if your idea will be chosen for the pumpkin drop.
Please show your best work.*

PRODUCTIVE THINKING: MATERIALS



Make a list of many, varied, and unusual recyclable materials that you could use to protect your pumpkin. Remember, you cannot use whole boxes, styrofoam, packing peanuts, bubble wrap, or pillows. When you think your list is complete, ADD more ideas.

Is everything on your list something that would be discarded or recyclable?

Name(s) _____

Teacher _____ Grade Level _____



PLANNING

Think of all the steps needed to complete your pumpkin protector and put the steps in order.

Here are two websites that might help you:

<https://sciencing.com/background-information-egg-drop-experiments-8704697.html>

<https://sciencing.com/physics-egg-drop-science-projects-8099094.html>

Name(s) _____

Teacher _____ Grade Level _____

PRODUCTIVE THINKING: DESIGN

Sketch at least TWO different designs for pumpkin holders. Remember that your pumpkin will be dropped from the roof of the school. Try to think of unique designs that no one else will use. Give each design a name.





DECISION MAKING



1. List the names of your 3 designs from the previous page.

- 1.
- 2.

2. Write at least five questions (criteria questions) to help you evaluate your alternatives.

Examples – Can I easily find the necessary materials?
 Will this design cushion the landing of the pumpkin?

Five Criteria Questions	
1.	
2.	
3.	
4.	
5.	

3. Answer the questions above for each design. Give each question an honest answer. Use your answers to help you make a decision. You may use the back and/or add additional paper to answer the questions for each design.

Design 1 Answers	Design 2 Answers

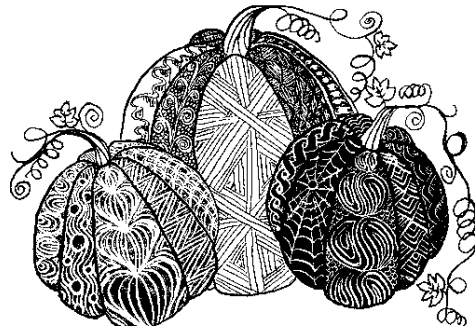
4. State your **final decision** and give many, varied reasons for your decision. Turn your criteria questions into statements below.

Name(s) _____

Teacher _____ Grade Level _____

DETAILED PICTURE

DRAW and **LABEL** a detailed picture of the design your team chose.



Design Name: _____

- ✓ We verify that our design is original.
- ✓ We verify that our entire packet is complete.
- ✓ We verify that we created our design with used/recyclable materials.

Team Signatures: _____
