

# BREAKOUT: DUST BOWL

## MODEL FIELDS

Let's put together a model and see how those dry conditions and strong winds affect different ground covers

### What You'll Need:

A pizza box  
Some tape  
A piece of cardboard the width your pizza box  
About 10 pipe cleaners  
A pair of scissors  
Sand/dirt mix  
piece of turf starter sheet about half the size of your pizza box  
a craft stick  
piece of plastic sheeting or large clear trash bag  
hair dryer or box fan  
pair of scissors  
dice



### WHAT TO DO:

Fold the bottom of your pizza box and use tape to secure the edges.

Divide the box in two with a piece of cardboard - this will give you two fields to test.

Cut 8-10 pipe cleaners into sections about 2 inches long.

**If you'll remember the perennial grasses of the great plains had extensive root systems, that were woven together forming a kind of mat.** Let's use a piece of turf starter sheet to represent the root system. Place it in one of the fields.

Randomly, weave half of pipe cleaners to the mat. Just bend them around a section to secure them in place.

Cover the "roots" with sand and then pour the remaining sand in the other field.

**For a time, the modern plow converted the impenetrable sod of the Southern Plains into one of the most agriculturally productive areas in the world.**

Use your craft stick to till the soil.

**Wheat is an annual crop that doesn't develop much of a root system. It doesn't grow deep and it isn't very wide. It doesn't need to be. It really only needs to give the plant an anchor and a nutrient delivery system for a few months.** So on this side, plant your rows of wheat by sticking the remaining pipe cleaners in the sand about a half inch or so.

Now you're ready to add some wind. This is a bit messy, so if possible, do this outside.

Carefully, slip your test fields inside a large clear plastic bag.

Tape a couple of skewers to the front of your box and drape the top edge of the plastic bag over it, creating a box around your field to help contain the sand.

Grab a hair dryer or position a box fan in front of the fields and turn it on. Observe what happens as you add wind to the mix.

Try adjusting the wind speed and see if that makes any difference.