



# Hurricane housing challenge



Windy Town council need to build some new houses after ten were blown down during the last hurricane. They have asked 'Topjob Architects' to design houses that can survive through extreme weather conditions.

Can you help the architects?

## ..... Your challenge

**To design and build a model house that can withstand extreme weather conditions.**

### Things to think about.....

- What are extreme weather conditions?
- What can happen to buildings during a hurricane?
- What shape houses are the strongest?
- Will your model house be tall?
- what will hold your model together?
- What type of roof will your house have?

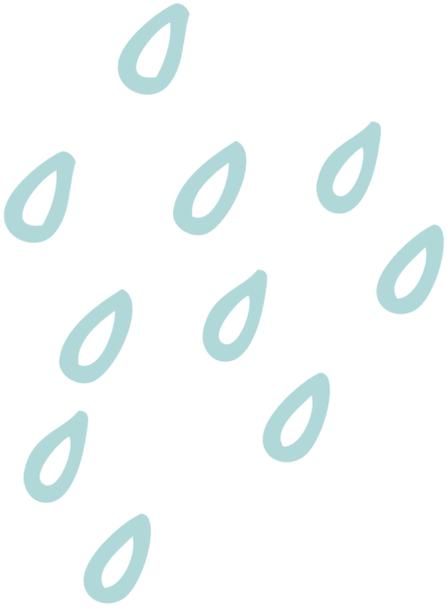
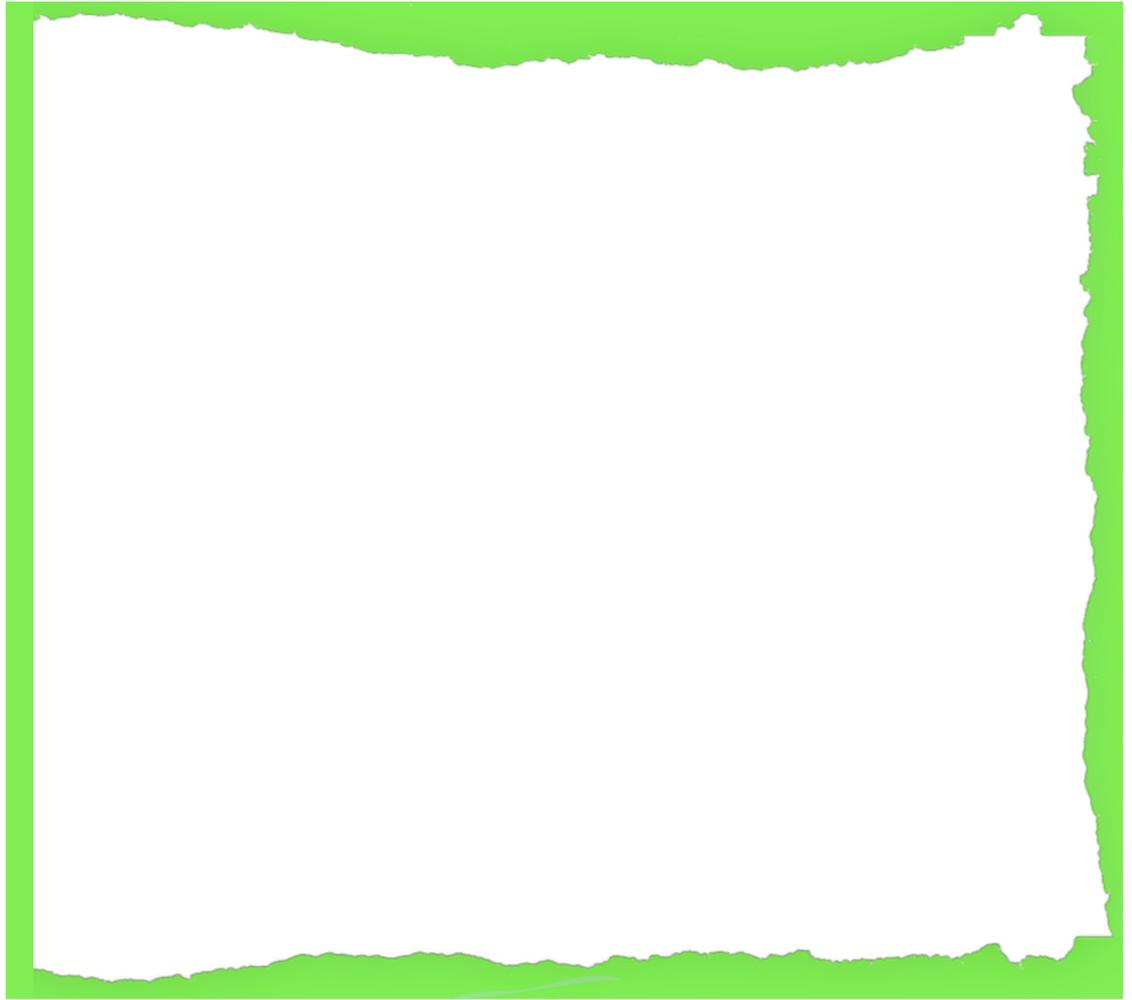


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## Make a plan .....

Design your house in the space opposite. You will use this as your plan when you build your model.



## Test your ideas .....

Select your materials and using your plan as a guide, build your model house. Once you are happy with your model you will need to test it out.

## Did your house survive the bad weather conditions?

### ..... Share your ideas

Present your house to the rest of the group. Explain the reasons for your design. Talk about what went well and what didn't. Tell them about any changes you needed to make as you built your model.

## Discuss .....

If you were to do this activity again what would you do differently?  
How could you make your model house even better?





# Hurricane housing facilitators notes



## About the activity.....

This activity will enable children to think about extreme weather conditions and in particular hurricanes. They will consider the destruction that can be caused by weather and what can be done to limit the damage.

In designing and making a model house children will need to consider strength, shape, stability, structure and the suitability of using different materials. Additionally, they will create and follow a plan, test and evaluate their work and present it to others.

## Materials .....

**House making materials-** These could include boxes, cardboard tubes, lolly sticks straws, pipe cleaners, tin foil, paper and cling film. It is important that there is a variety to choose from.

**Sticking materials-** These could include glue, string, plasticine, paper clips and sticky tape. There should be a choice.

**Waterproof tray or bowl** to be used when testing the suitability of the houses

**Fan- or hairdryer** to simulate wind

**Spray bottle with water-** to simulate rain

**Dried rice or lentils** - to simulate hail

**Pencils**

## Advance preparation .....

Collect a variety of materials that can be potentially used for house building. It is important that children have a choice of what to use so it may take a while to gather together enough materials.

Ensure that you have a suitable device to show the additional resources or print them out before starting the activity.

## Instructions .....

Start by reading the introductory story to the children.

Ask them what they think extreme weather conditions are and if they have ever been out in very bad weather- what was it like? Where was it? were they frightened? Do they know what a hurricane is?

Show the children the images of hurricane damaged buildings.

Read out the challenge and tell them that they are going to design and build a model house that is strong enough to survive through a hurricane.

Give out the worksheets and equipment to the children.

Encourage the children to talk about how they are going to design their model houses. What materials will they use? How could they make their houses extra strong?

Support the children to build their model houses allowing them to learn from their errors and make changes as necessary. Once finished enable them to test the resilience of their houses using a fan, water spray and dried rice/lentils to simulate extreme weather conditions.

Encourage the children to present their houses to the rest of the group. Prompt them to talk about their choices and any problems they faced. Ask them to explain any changes they needed to make from their original plan and whether they thought their design and build was a success or not.

Discuss with the children what they would do differently if they were to do the activity again, how could they improve their model houses?



# Hurricane housing resources



Hurricane Charley 2004



Hurricane Irma 2017



# Hurricane housing resources



Hurricane Harvey 2017



Hurricane Katrina 2005



# Hurricane housing resources



Hurricane Sandy 2012



Hurricane Matthew 2016