

# Building a Geodesic Dome Out of Newspaper

## What You Will Need

- many newspapers
- masking tape
- measuring tape
- markers, glitter, beads, and glue if you want to decorate

## Make a Prediction

Predict how many magazines you think your newspaper dome will be able to support.

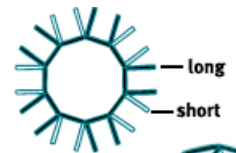
## Try It Out

1. Rolling the newspapers: Stack five full size flat sheets of newspaper together. Starting in one corner, roll the sheets up together as **tightly as you can** to form a tube. When you reach the other corner, tape the tube to keep it from unrolling. Repeat until you have **65** tubes.
2. Now cut down the tubes to make **35 "longs" and 30 "shorts."** **Longs:** Cut off both ends of a tube until it is 65 centimeters long. Use this tube as a model to create 34 more longs. Be sure to mark all the longs clearly in some way, such as with colored tape, so you can tell them apart from the shorts. Decorate the tubes if you like. **Shorts:** Cut off both ends of another tube until it is 60 cm long. Use this tube as a model to create 29 more shorts. Decorate the tubes if you like.

3. Tape ten longs together to make the base of the dome (a decagon).



4. Tape a long and a short to each joint (vertex). Arrange them so that there are two longs adjacent to each other, followed by two shorts, and so on, as shown.



5. Tape the tops of two adjacent shorts together to make a triangle. Tape the next two longs together, and so on all the way around.



6. Connect the tops of these new triangles with a row of shorts. (The dome will start curving inward.)



7. **This step is tricky. You need five shorts and ten longs.** At each joint where four shorts come together, tape another short sticking straight up. Connect this short to the joints on either side with longs, forming new triangles.



8. Connect the tops of these five new triangles with five longs.



9. Finally, add the last five shorts so that they meet at a single point in the center of the dome. (You might need to stand inside the dome to tape them together.) To test your dome's strength, see how many magazines you can load on top.

