

The Geometry of Fire: Triangles, Squares, Lines!

Step 1- Cut out the big square.

Step 2- Fold the square in half along the dark diagonal line so that the words “Heat”, “Oxygen” and “Fuel” are on the outside. *These are the components of the “Fire Triangle” and all 3 are necessary for fire to occur.*

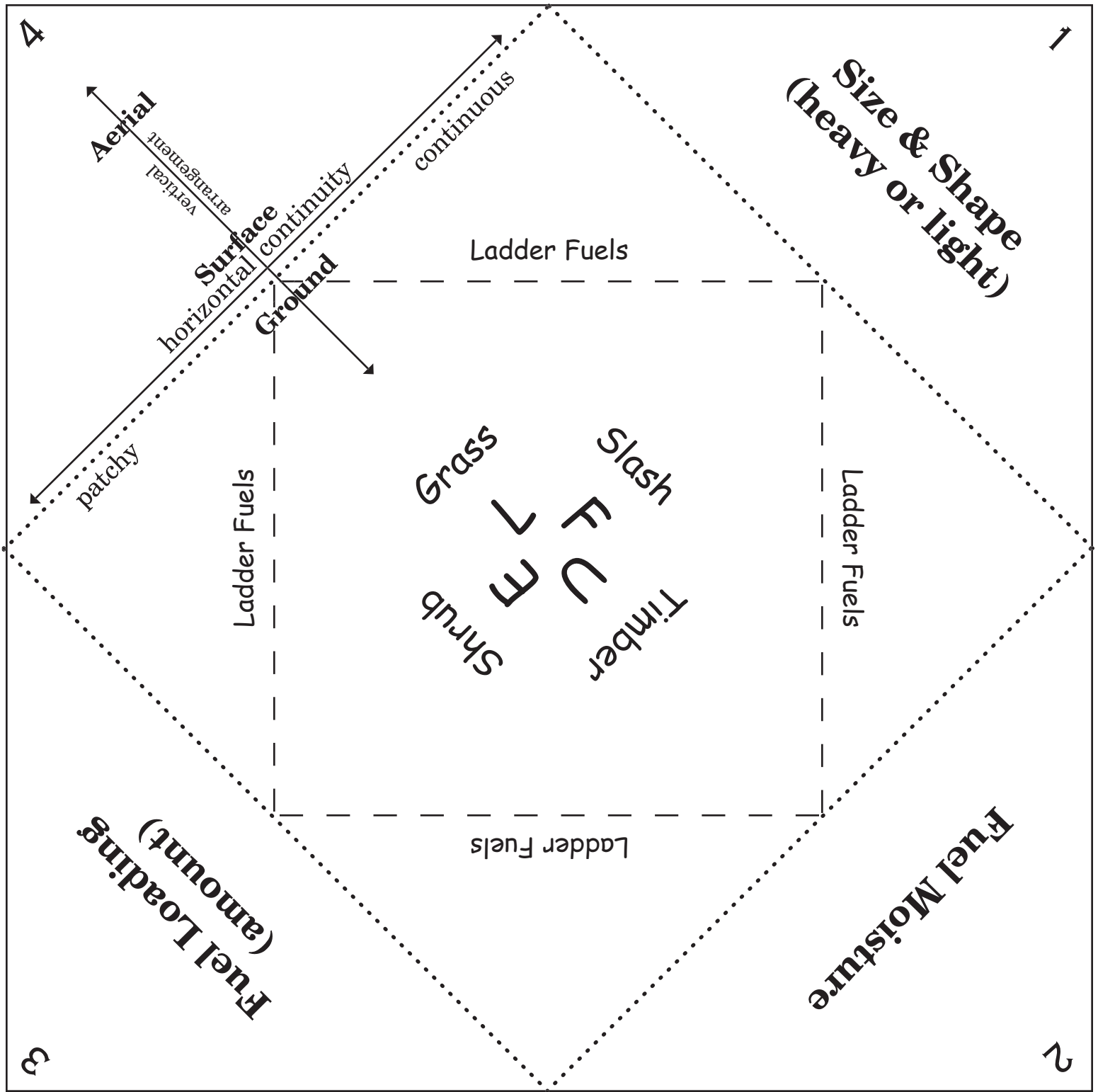
Step 3- Turn this “Heat-Oxygen-Fuel” triangle upside down and notice the smaller triangle showing 3 factors that influence fire behavior: *Weather, Topography and Fuel Characteristics.*

Step 4- Unfold the triangle and place the square on a flat surface, with the dark diagonal line down.

Step 5- Fold each corner in along the dotted lines, so that the corners meet in the middle. *Notice four weather conditions that influence fire behavior.*

Step 6- Fold the tips of the corners back along the dashed lines. Notice four types of fuels that influence fire behavior.





Step 7- Lift and unfold the flaps, one by one, to see other fuel characteristics that influence the way fire burns: 1) Fuel Size and Shape, 2) Fuel Moisture, 3) Fuel Loading, and 4) the arrangement of the fuel on the land (Horizontal Continuity from patchy to continuous, and Vertical Arrangement: ground, surface or aerial fuels).

Step 8- Now fold the flaps back in, so that the weather factors are showing, and fold each corner in along the dotted line until the corners meet in the middle with the word "Weather" showing on one flap.

Step 9- Turn this square over, and fold it again along the original dark line, with this dark line on the outside, and the word "weather" is on the inside.

Step 10- Hold the triangle so that the side with the ● ● ● ● line is facing you. Notice 5 topographical features that influence fire behavior: Barriers (roads, rivers, cliffs, lakes, rocks), Slope (Steepness), Elevation, Aspect (North-facing or South-facing), and Shape (wide or narrow valleys, box canyons, ridges or saddles).

Step 11- Now fold the top of the triangle back along the ● ● ● ● line and tuck it inside the triangle. Fold the tip of the back triangle towards you and down, to show the "Topography" label!

