5.2 Explanations Tool: What Happens to Methane When It Burns?

**Draw and label** arrows that show molecules moving into, through, and out the flame when methane burns.
- Show and label molecules with carbon atoms
  - moving into the flame.
  - leaving the flame
- Show other, relevant molecules.

**The Matter Movement Question**

Name the chemical change that happens when methane burns:
Write the chemical equation for this change:

**Chemical Change**

What molecules are carbon atoms in after the chemical change?
What other molecules are produced?

What molecules are carbon atoms in before the chemical change?
What other molecules are needed?

**The Matter Change Question**

What forms of energy go into this chemical change?
What forms of energy come out of this chemical change?
Where does the energy go or stay after the change?

**The Energy Transformation Question**

**Explain in words**: What happens to methane when it burns? (Answer on the back).

*Use this Explanations Tool to help guide your written explanation, being sure to answer the Three Questions.*

Remember: **Atoms last forever** (so you can arrange atoms into new molecules, but can’t add or subtract atoms).
**Energy lasts forever** (so you can change forms of energy, but energy can’t appear or go away).