KEY CONCEPT
The heart is a muscular pump that moves the blood through two pathways.

VOCABULARY

<table>
<thead>
<tr>
<th>atrium</th>
<th>pacemaker</th>
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<tbody>
<tr>
<td>ventricle</td>
<td>pulmonary circulation</td>
</tr>
<tr>
<td>valve</td>
<td>systemic circulation</td>
</tr>
</tbody>
</table>

MAIN IDEA: The tissues and structures of the heart make it an efficient pump.
Fill in the pattern notes with the main chambers and valves of the heart. Use Figure 30.7 to help you.

RIGHT
1. right atrium
   tricuspid valve

2. 
   _____ valve

LEFT
3. 
   _____ valve

4. 
   _____ valve

5. Explain what makes the heart such an efficient, self-regulating pump.

6. After the SA node stimulates the atria to contract, what happens next in the heartbeat cycle?
Fill in the process diagram below to summarize the blood flow in the heart.

**Oxygen-poor blood flows into right atrium, then is pumped into the right ventricle.**

**MAIN IDEA:** The heart pumps blood through two main pathways.

7. What are the main functions of the pulmonary circulation and the systemic circulation?

8. An atrium in a building is the first room or area that people enter before going into the rest of the building. How does this meaning relate to the location and function of an atrium in the heart?

9. Systemic means “related to a an entire system,” while pulmonary is based on the Latin pulmo, which means “lung.” Make up a table or draw a diagram using these clues to help you remember the difference between pulmonary and systemic circulations.