

Name: _____ Date: _____

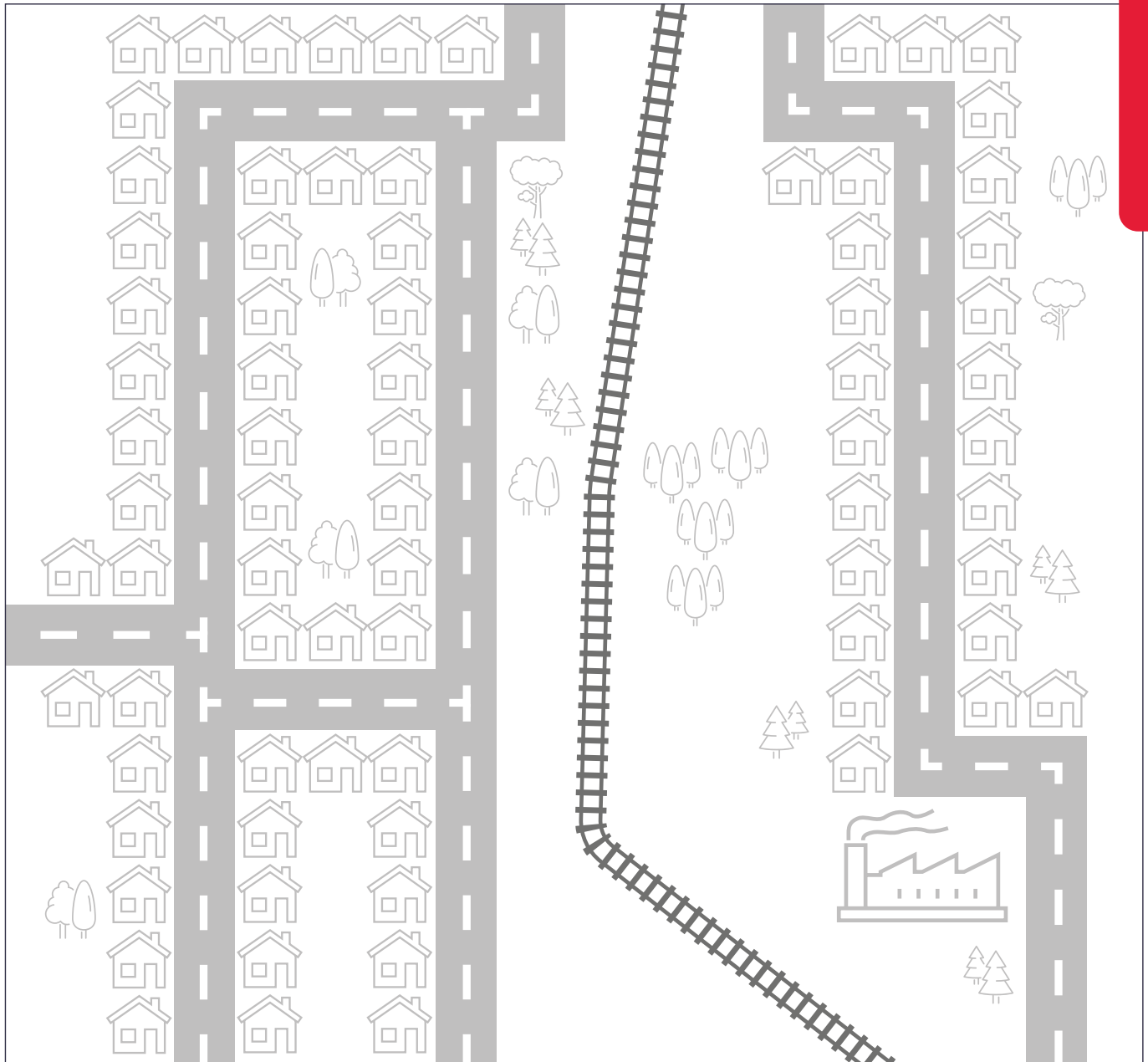


Heat Worksheet 2

Heat Network Map

You are going to work as a heat network planner for a small village.

Learning Lab®



1. Draw a plan on the map above for pipes carrying heated water from the factory to nearby homes that follows the rules.





2. A budget is a plan for how much it will cost to complete a plan.

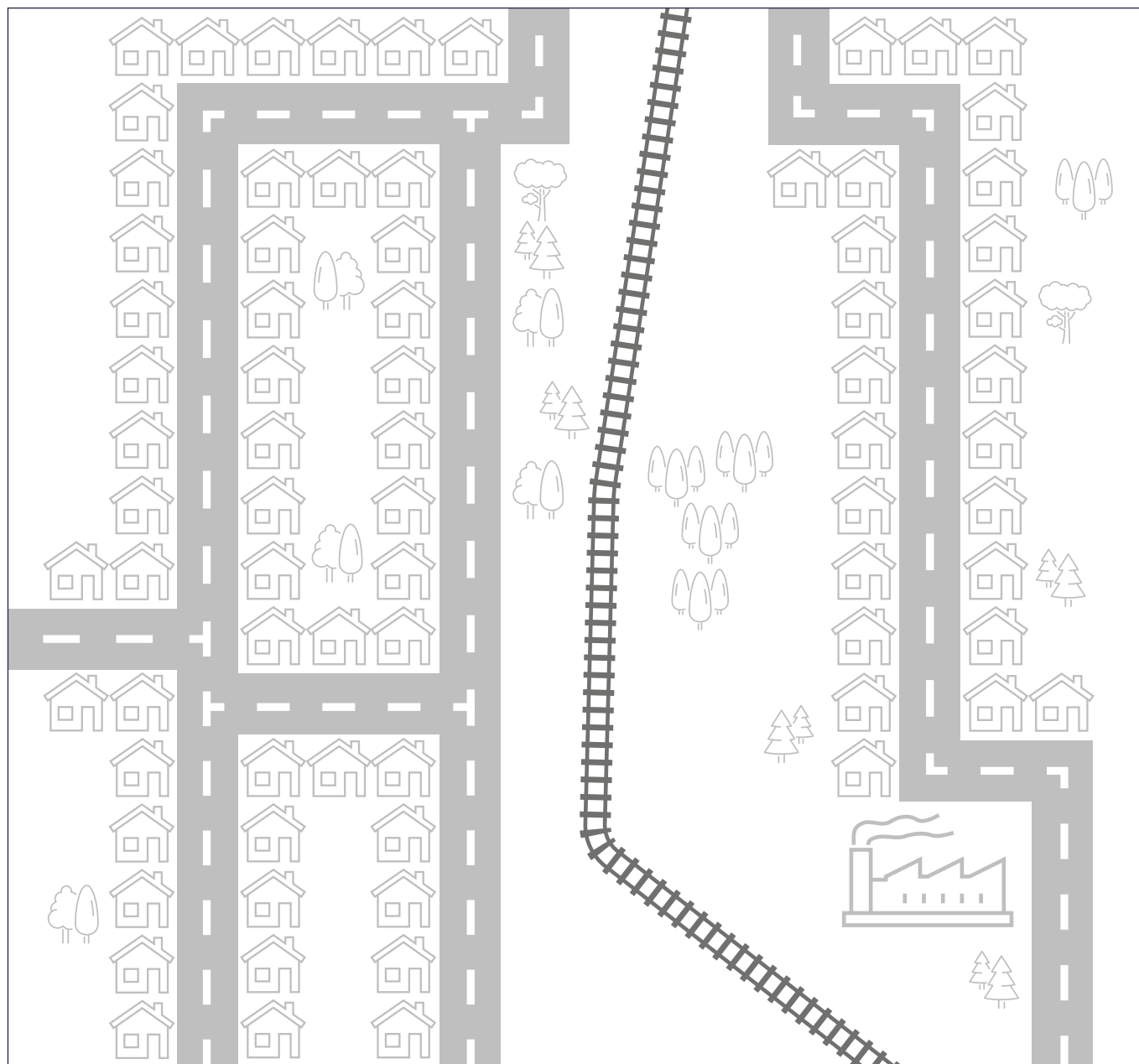
Create a budget for the plan you have created.

Costs

- Every centimetre of pipe drawn costs £3,000.
- Every time a pipe crosses under a road it costs an extra £10,000.
- Every time a pipe crosses under a train track it costs an extra £15,000.

How many centimetres of pipe did you draw?		x £3,000	= £
How many times did a pipe cross under a road?		x £10,000	= £
How many times did a pipe cross under a train track?		x £15,000	= £
Total cost			= £

3. Try to draw a different plan that reduces the cost of the heat network.





Create a budget for the new plan you have created.

How many centimetres of pipe did you draw?		x £3,000	= £
How many times did a pipe cross under a road?		x £10,000	= £
How many times did a pipe cross under a train track?		x £15,000	= £
Total cost			= £

4. Discuss with the people around you who was able to create the cheapest plan for the heat network and how much it cost.

5. Why do you think it's important to create a plan at the start of a building project?

6. Apart from cost, what else do you think needs to be considered when building a heat network in the village above?