



Name \_\_\_\_\_



**DIRECTIONS** – Follow the steps below and help your community design a railroad crossing device that will save lives.

**Step One:**

**The Problem:** People in your community are driving around lowered gates at a railroad crossing. The locomotive engineers are reporting many “near misses” with vehicles to your local police department. You have been asked to try and solve this problem for your community with a unique idea or a new invention. Good Luck!

**Step Two:**

**The Cause:** What causes this problem? What are the future possibilities of this problem?

**Step Three:**

**Brainstorm:** List as many ideas as you can possible think of for solving this problem. Don’t let anything stand in your way during this step. Think of the unique and even the impossible—you never know where it may lead you.

**Step Four:**

**Think:** Look at your brainstorming list. Rank your ideas from best to average. Try combining some of your ideas to come up with new ones.

**Step Five:**

**Design:** Put your ideas down on paper. Draw the invention with different parts labeled, or write your new idea out in paragraph form.

**Step Six:**

**Analyze:** Will your invention really work? Is it practical? Is it too large? Will it be too expensive?

**Step Seven:**

**Share:** Share your invention or new idea with your classmates. Look for unusual combinations among your class members to design a class solution.