## 2008 Chatsworth Train Collision

On September 12, 2008, a commuter train and a freight train collided head-on in the Chatsworth district of Los Angeles, killing 28 and injuring more than 100. The crash was the worst train accident in 15 years and taxed emergency resources. The accident made national headlines and raised many questions about the safety and reliability of the nation's rail system.

**Start Simple** To build a Cause Map, start at one of the goals and ask "why" questions. Capture the answers visually in a cause box. 5-Why Cause Map



Expand the Cause Map Continue asking "why" guestions and adding cause boxes to lay out the cause-and-effect relationships. The Cause Map can be expanded until all



Three tunnels

on this section

of track

AND

Tunnels are only wide enough to

support a single

track

Following

schedule

AND

Given right of

way by train dispatcher

This section of

track is single

track

AND

Freight train

traveling

eastbound on

the track

AND

Geography of

area

Evidence: Section of track

station through the Santa

Expensive to

widen tunnels

Evidence: Tunnels were originally built in the early

1900s. The tracks have

functioned well enough that there has been no urgent

desire to invest significant

capital to widen the runnels

runs from Chatsworth

Susana Pass which is

mountainous