



**Academic Activity**  
**Chapter 14**

**Solution Team**

This teamwork activity creates teams of three to research, propose, and justify a solution to a problem. It gives each team member a specialty, and designates each as a specific type of engineer, scientist, or a specialist on an issue. First the specialties have to be individually researched; the team members then have to work together to propose and justify a possible solution using everyone’s expertise.

One-third of the students should be assigned (or randomly choose) a problem and specialty. These are the team project managers. The rest of the students should be assigned (or randomly choose) a science or engineering field. Once everyone has a designation, the team managers should choose a scientist and an engineer. This could be done as a five-minute walk-around job fair activity. Team leaders and specialists should interview each other for the best fit for their particular problem.

Once teams are established, each individual should respond to the following prompts as research for homework and record their answers in their own words:

- Define your specialty in your own words.
- Describe a current solution for the problem from your specialty.
- Describe or propose a new solution to the problem that reflects your specialty.

When the teams meet up again they need to:

- Share their research and proposals.
- Choose one or integrate parts of more than one.
- Write a proposal describing and justifying their solution.
- Present their proposal to the class.

<b>Engineers</b>	<b>Scientists</b>	<b>Problem and Specialities</b>
Software Engineer	Biochemist	Chemical or Petroleum Spill
Electrical Engineer	Zoologist or Botanist	Building in Sensitive Ecosystems
Petroleum Engineer	Microbiologist	Creating a Better Artificial Joint or Limb
Safety Engineer	Geophysicist	Communication Devices for Underwater Use
Mechanical Engineer	Neurologist or Orthopedic surgeon	Robotic Solution for Transporting a Nuclear, Biological or Chemical Hazardous Material
Civil Engineer	Physicist	Portable Purification System for Emergency Response
Chemical Engineer	Chemist	Creating a Better Mobile Phone for Use by Blind or Paraplegic Customers



**Academic Activity  
Chapter 14**

**Solution Team**

After the presentation, evaluate the members of your team, including yourself. Turn the evaluation forms in to the instructor.

<b>Evaluation form</b>			
Came to the group with specialty defined	Well	A little unclear	Not prepared
Was open to other ideas in the group	Yes	Kind of	Not at all
Used group time wisely	Yes	Some of the time	Not at all
Helped create final proposal/justification	Yes	Some	Not at all
Benefited the team	Yes	A little	Not at all