| Timeline  | 5th Grade   | 2nd Grade   | Kindergarten                         |  |
|-----------|---|---|--------------------------------------|--|
| Teaching  | Learned differences   |   |                                      |  |
| 5th grade | and similarities between                                    |   |                                      |  |
|           | mixtures and solutions                                      |   |                                      |  |
| Preparing | • Chose a lesson to teach                                   | Completed a KWL on                                      |                                      |  |
| for the   | matching the second   | mixtures and solutions                                  |                                      |  |
| 5th-2nd   | grade-level expectation                                     |   |                                      |  |
| lesson    | to know that not all  |   |                                      |  |
|           | objects or materials  |   |                                      |  |
|           | respond to change in the                                    |   |                                      |  |
|           | same way  |   |                                      |  |
|           | They developed the  |   |                                      |  |
|           | outline of the activity                                     |   |                                      |  |
|           | and then some questions                                     |   |                                      |  |
|           | to support the  |   |                                      |  |
|           | development of the  |   |                                      |  |
|           | activity.   |   |                                      |  |
| 5th-2nd   | Buddy pairs used salt, pepper, water, and coffee filters    |   |                                      |  |
| lesson    | to explore solutions and mixtures. The fifth graders        |   |                                      |  |
|           | used questions to get the se                                | cond graders to predict                                 |                                      |  |
|           | what would happen and then verbalize observations of        |   |                                      |  |
|           | what happened with the cof                                  | fee filter and the                                      |                                      |  |
|           | water/pepper/salt mixture. The second graders learned       |   |                                      |  |
|           | that not all objects react wit                              | th water in the same way in                             |                                      |  |
|           | addition to introducing them to the terms <i>solution</i> , |   |                                      |  |
|           | mixture, and evaporate.                                     | <u></u>   |                                      |  |
| After the | • Reflected on the lesson                                   | <ul> <li>Continued to observe</li> </ul>                |                                      |  |
| 5th-2nd   | from the position of  | what happened with the                                  |                                      |  |
| lesson    | teacher   | water/salt solution that                                |                                      |  |
|           |   | they had left out                                       |                                      |  |
| Preparing |   | <ul> <li>Picked out the</li> </ul>                      | <ul> <li>Prepared by Mrs.</li> </ul> |  |
| for the   |   | vocabulary words that                                   | Shumbera explaining                  |  |
| 2nd–K     |   | they had learned over the                               | behavior expectations                |  |
| lesson    |   | past two weeks and                                      | and safety guidelines for            |  |
|           |   | decided which ones were                                 | when their buddies were              |  |
|           |   | most important to teach                                 | visiting                             |  |
|           |   | the kindergarten class                                  |                                      |  |
|           |   | <ul> <li>Developed an activity</li> </ul>               |                                      |  |
|           |   | to teach the  |                                      |  |
|           |   | kindergarteners   |                                      |  |
|           |   | characteristics of solids                               |                                      |  |
|           |   | and liquids   |                                      |  |
| 2nd–K     | In partners, the second grade students asked the            |   |                                      |  |
| Lesson    |   | kindergarteners questions about various mixed foods     |                                      |  |
|           |   | and had this opportunity to describe what the materials |                                      |  |

|                        | they were given looked and smelled like. Then, the students mixed salt and water together in a plastic cup. The solution was poured onto a tray lined with black paper. After the completion of these tasks, the students came back to the rug for a whole group discussion in which kindergarten students made predictions on what they thought would happen in the tray. |  |
|------------------------|--|--|
| After the 2nd–K lesson |  | <ul> <li>A few days later, students were asked to predict what happened. Most thought it was "magic."</li> <li>Mrs. K explained that the salt dissolved in the water, which was one change. Then sunlight from the window (heat) made the water change by evaporating and leaving just the salt.</li> <li>Students were introduced to the terms dissolve and evaporate and an example of a change that could be reversed.</li> </ul> |