

## **Lesson 12:** Making a single-signature<sup>1</sup> book (Codification Activity)

Codification activities are an opportunity for students to provide or invent a context that links curriculum concepts together. In the case of earthquake education, a codification activity should help students reinforce the concepts that make earthquake science, hazard awareness, and hazard prevention three aspects of a unified whole: earthquake safety. In this lesson, students use information from previous lessons to write stories about individuals or communities affected by an earthquake, and publish their stories in a single-signature book.

This lesson is adapted from an art/literacy project originally developed at the University of Washington's Pipeline Project (Stickler, 2000).

Allow 3 to 4 two-hour blocks for this activity.

### **Materials**

**Note!** The following materials are sufficient to build one single-signature book. Multiply the materials below by the number of books that are to be made (one book per student). However, some of the items (i.e., glue sticks, scissors, sewing needles, and tape) can be shared amongst the students.

- One sheet of colored paper (21.5 cm x 28 cm)
- Six sheets of white paper (21.5 cm x 28 cm)
- Sewing needles
- 1.5 yards of button thread
- Paper clips
- 2 scraps of mat board (15 cm x 23 cm)
- Colored plastic Scotch tape (4 cm width)
- Scissors
- Glue Sticks
- Clear contact paper (optional)
- Colored pencils, crayons, markers, papers, etc.
- One copy of the writing outlines (attached at the end of this lesson)

### **Procedures**

#### *Day 1*

1. Tell the students that each of them is going to write about an individual or a community affected by an earthquake. Explain to students they can invent the locations, characters, quotations, etc. for the story, but they are encouraged to include as much information from the previous lessons in their stories as possible. Distribute copies of the writing outlines (one per student) and ask them to fill out the top section. Students can work in groups together for this stage. Allow 10-15 minutes.

---

<sup>1</sup> A single-signature book is a simple way of binding a book using a centuries-old bookbinding technique.

2. Now ask each student to do a story map using illustrations, words, or sentences. Explain to students that creating a story map may help them with writing the story. See Figure 1 for an example of a story map. To get them started ask students the following questions: Who should be in their story? Where does this story happen? What happens first? Students can choose to brainstorm ideas together or work individually. Encourage students to think about what kind of information from the previous lessons (science and hazards lessons) they would like to include in their stories and why. Allow 30 minutes or more for completing a story map.

3. Collect students' story maps at the end of classroom period.

### *Day 2*

4. Return students' story maps along with a blank sheet of paper (or more). Tell them today they are going to finish their story maps (if they are not done already), and start writing the first draft of their stories (on the blank sheets). Encourage students to refer to their story maps when writing their first draft if they need to. Otherwise, students should feel free to diverge from their story map to incorporate new information as they proceed to complete their first draft. Allow the rest of the classroom period for this activity.

5. Collect students' first drafts and story maps at the end of classroom period.

### *Day 3*

**Note!** Before the beginning of the class, create a few bookmaking stations in the classroom where students will be making their books in groups of 4-5. At each station allow enough materials for each student to make a book. Each station should have at least one pair of scissors, one glue stick, a few Scotch tape rolls of different colors, mat boards (2 per student), a couple of sewing needles and sewing thread.

6. Explain to students they are going to make a single-signature book. Provide each student with six sheets of white paper. Tell them six sheets of white paper make a 24-page book. Give each student one sheet of colored paper (for the endpapers). You may want to let students choose the color of their endpapers. Instruct students to fold their six pages of paper in half cross-wise (Figure 2). They can use their sheet of colored paper on the outside. Explain to them the colored paper will become their endpapers.

7. Instruct students to thread a needle with about 1.5 yards of button thread. Tell them they do not need to tie a knot, but they should even out the threads so they have two equal strands. Students may want to secure their folded pages by putting two paper clips on opposite sides as shown in Figure 3. Now ask students to mark four evenly spaced dots on the outside fold of their signature. These dots will serve as guides for sewing. Beginning at one of the dots at either end of the signature, students should be instructed to poke the needle down through the top of the paper, and then come up at the next dot. They should then sew down through the following dot and come back up at the last dot

(Figure 4). Students should now bring their thread ends together and tie a double knot in the middle of the fold of the signature. They can then cut out the ends, leaving enough thread so that the knot will not come untied.

6. Now is time for picking up covers. For their book, students will need two pieces of 15x23 cm mat board. Instruct students to cut a 28 cm piece of Scotch tape and place the tape sticky-side up on a flat surface. They should then lay their front and back covers down as shown in Figure 5, leaving at least 1 cm of space between the covers. They should then fold then ends of the tape over the top and bottom edges of the covers.

7. Now students should be instructed to use the glue stick to glue the first piece of paper to the inside front cover of their book. To do this, it is recommended that students close the book and adjust the fit of the back piece of paper, then open the book and glue the back endpaper to the inside back cover (Figure 5).

**Caution!** If students glue both endpapers down without closing the book and fitting the back page, it may pull too tight and tear when they close it.

8. If time allows, return students' first drafts and story map so that they can finish them. At this stage students should not be entering their stories into their books. Students who have finished their draft can start working on writing an autobiography page. The autobiography can later be added to the end of their books in an "about the author" page, where they can place a photograph (or drawing) of themselves.

**Note!** You may choose to take an author picture of each student for this activity, after making sure you have written approval from their parents or appropriate authorities.

9. Collect students' writings and books at the end of classroom period.

#### *Day 4*

**Note!** Before the beginning of the class, create a few art stations where students will be illustrating their stories and decorating their books. Each station should have colored pencils, crayons, markers, colored papers, and a pair of scissors.

10. Return students' writings, drawings, and books. Explain to the students that they are going to enter the final version of their stories into their books, illustrate their stories, and decorate their book covers. Divide them into groups of 4-5 students and guide them to each station. Explain to all students to begin by entering their stories into their books, allowing room in each page for an illustration that accompanies the text. Students may choose to draw an empty box of different dimensions in each page where an illustration can be fit. Each illustration can be accompanied by 2-3 lines of story or more.

**Note!** Give students their photographs from Day 3 (or portrait drawings). Students can glue them to the last page of their book next to their autobiography. Explain to students they can set aside a title page and a dedication page at the beginning of their books. The

title page may include the title of the work, the author's name, and the copy right date. Help students cover their final product with clear contact paper for protection (optional).

11. Congratulate students for their published books. If time allows, students can take turns reading their stories to one another. Students will get to keep their books. You may choose to make photocopies of the pages of their books for later assessment of each student's learning throughout this curriculum.

**Note!** It is strongly recommended to dedicate a day to celebrate students' accomplishments, during which they receive a certificate for successful completion of all lessons and are recognized as published authors. Students can present their stories to their families, along with teachers and school administrators on the celebration date. In some schools, students may be allowed to place their books in the school's library where they can be read and appreciated by others.

### **Useful Internet Resources**

The University of Washington's Pipeline Project:  
<http://www.washington.edu/uwired/pipeline/>

Teachers & Writers Collaborative:  
<http://twc.org/>

### **References**

Beven, R.Q., Crowder, J.N., Dodds, J.E., Vance, L., Marran, J.F., Morse, R.H., Sharp, W.L., Sproull, J.D., 1995, Seismic Sleuths-Earthquakes: A teacher's package for grade 7-12 (second edition), American Geophysical Union and Federal Emergency Management Agency, FEMA 253, 364 p.

Stickler, C., 2000, Making a single-signature book – Just like I did at Northwest Bookfest, prepared for 2000 Northwest Bookfest, Seattle, Washington.

**Writing Outlines**

**Name:** \_\_\_\_\_

This handout is adapted from Beven et al. (1995).

1. Enter in the story information below:

Date and time of the earthquake (real or hypothetical): \_\_\_\_\_

Location: \_\_\_\_\_

Estimate strength and impact:

Richter magnitude: \_\_\_\_\_

Maximum Mercalli intensity if known: \_\_\_\_\_

Deaths: \_\_\_\_\_

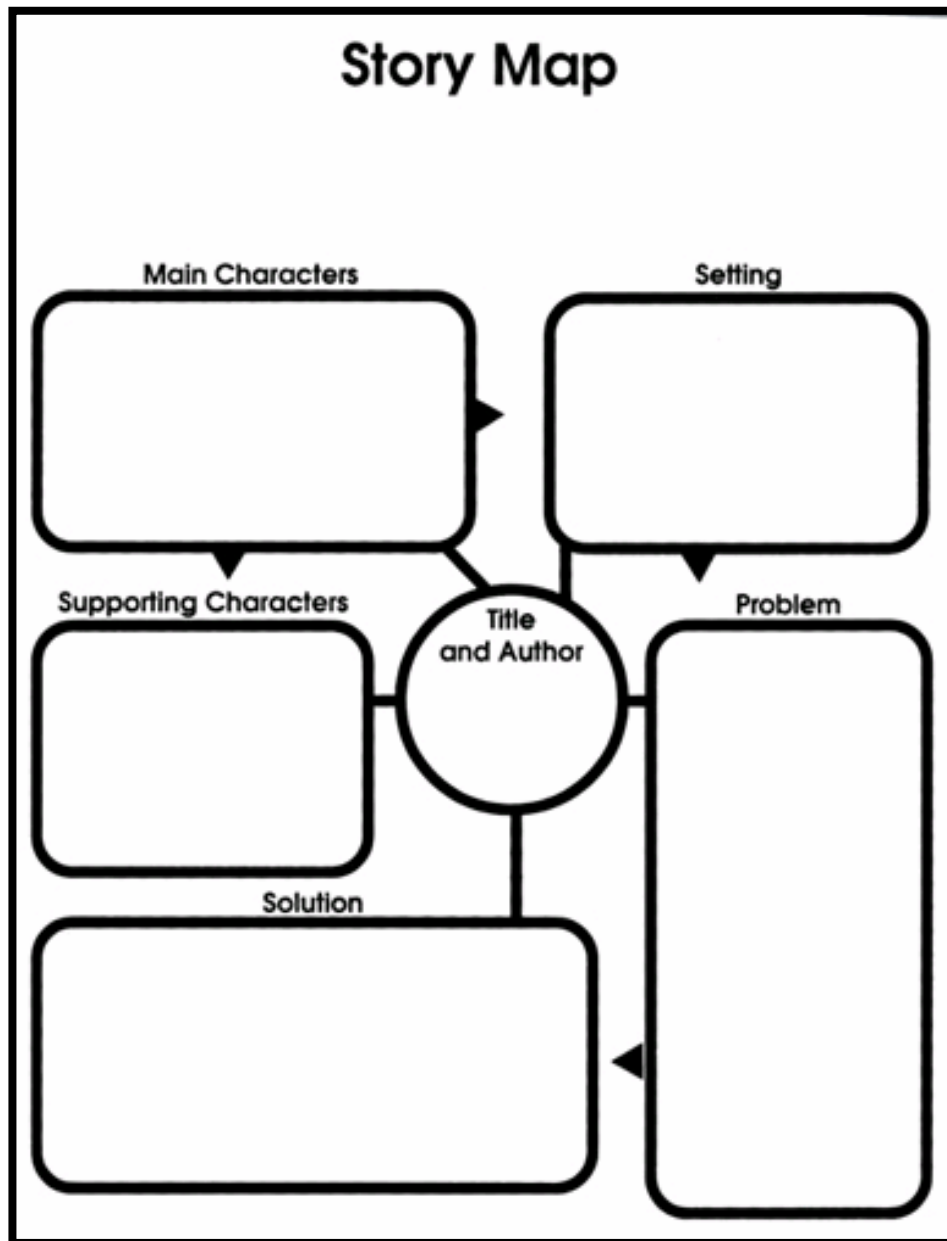
Property damage: \_\_\_\_\_

Date of last earthquake in this region: \_\_\_\_\_

---

2. Now use the above information to draw a story map here:





**Figure 1.** Example of a story map

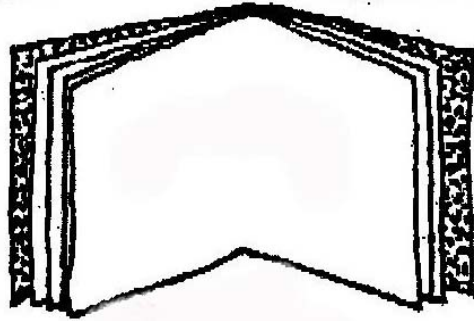


Figure 2

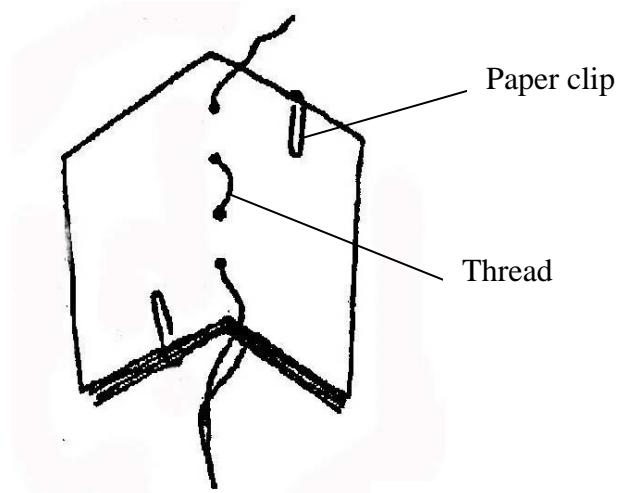


Figure 3

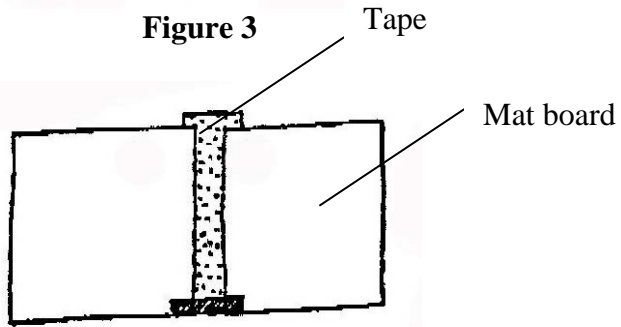


Figure 4

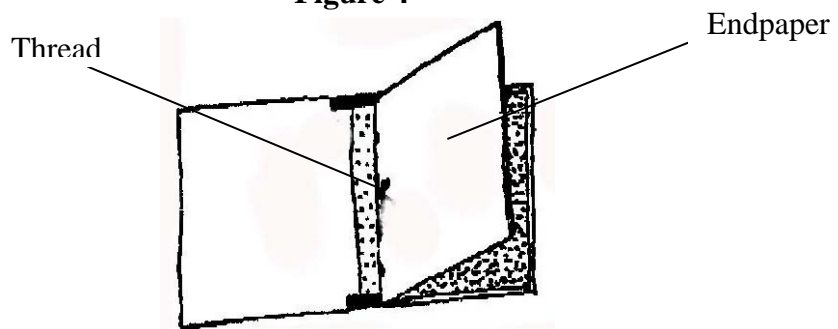


Figure 5