Synthesizing

The dictionary defines **synthesis** as "the bringing together of all the parts to make a whole." Defining synthesis as an after reading strategy, however, denotes bringing together a body of knowledge and applying (using) it in some new or creative manner. When students engage in synthesizing activities, they must demonstrate they are able to do more than recall what they have read. They must, in fact, activate higher-level thinking skills that demonstrate their understanding of the material as well as their ability to analyze and apply their knowledge.

Synthesis activities require students to actively engage in the learning process. Synthesis activities may include constructing a

- poster
- map
- poem
- newspaper article
- brochure
- game
- graph
- cartoon
- book
- diorama

A synthesis activity may be used as a form of assessment. The activity can be used to determine the level at which a student has mastered what he or she has read. This form of evaluation, which requires a student to perform a task demonstrating her or his understanding of content, is referred to as *authentic assessment*.

Teachers are often reluctant to assign synthesis activities because they are more difficult to evaluate than traditional tests. Traditional assessment generally requires students to select an answer from a list of possible responses, recall information to fill in a blank, or match terms with their meanings. Most often, traditional assessment is teacher-controlled since the tests are written by the teacher or provided by the textbook publishing company.

When given an opportunity to synthesize the information they have learned, students make more decisions about the information they present as well as the structure they use to present it. In order to maintain some control over how a project is to be completed as well as to maintain consistency in evaluation, the teacher generally provides a rubric that details guidelines for evaluation. The guidelines (rubric) contain criteria that describe levels of performance or understanding. Rubrics provide expectations; however, students still have flexibility in organizing, constructing, and presenting the project.
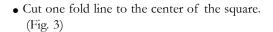
Synthesizing

To Teach students to synthesize, use Selection 22 and Graphic Organizer 26. You may want to make a transparency of the graphic organizer to use as you lead a discussion of the steps in the left column.

1. Make a copy of Graphic Organizer 26 for each student.

2. Give students a sheet of white 8-1/2 x 11 paper.

3. Model each step in the design phase, having students complete one step at a time.

4. Lead a general class discussion on symbols or have students read a section in their textbooks focusing on the meaning and importance of symbols.

5. Tell the class that each student will construct a triarama depicting their understanding of the use of symbols.

6. Go through each of the steps in the "finishing the project" phase of the activity.

7. Finally, tell students that they are to write a description of why they chose the symbols they did. They could write a description of "What America Means to Me through These Symbols."

8. Show students Graphic Organizer 26, which contains the rubric that will be used to evaluate their final product.
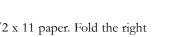
Making a Triarama

To make the design:

- Take a piece of 8-1/2 x 11 paper. Fold the right corner down to the left side of the paper to form a triangle. Cut off the rectangle that is left over. (Fig. 1)

  (Fig. 1)

- Open the paper. You will have a square with a diagonal line from top left to lower right. Fold the left corner of the square down to form a triangle. Then open the paper. You will find the letter X outlined on your paper. (Fig. 2)
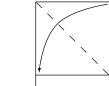
  (Fig. 2)

- Cut one fold line to the center of the square. (Fig. 3)

- Overlap the two triangles and glue or tape them to form a triarama. (Fig. 4)

  (Fig. 3)

Finishing the project
- On a separate piece of paper draw four symbols that represent the United States, e.g., Liberty bell, US Flag, Mt. Rushmore, Washington Monument.
- Color the symbols.
- Glue them on the background of the triarama.
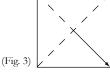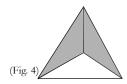- On the base of the triarama, write a description of "What America Means to Me."

  (Fig. 4)

To apply the strategy, have students read other passages of text and use Graphic Organizer 26 to develop additional triaramas.

To extend the strategy, have students complete other synthesis activities, e.g., posters, political cartoons, brochures.
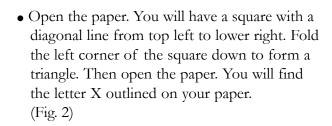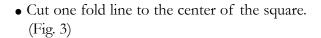
Selection 22

Making a Triarama

To make the design:

- Take a piece of 8-1/2 x 11 paper. Fold the right corner down to the left side of the paper to form a triangle. Cut off the rectangle that is left over (Fig. 1)

(Fig. 1)

- Open the paper. You will have a square with a diagonal line from top left to lower right. Fold the left corner of the square down to form a triangle. Then open the paper. You will find the letter X outlined on your paper. (Fig. 2)

(Fig. 2)

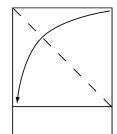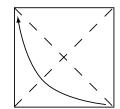- Cut one fold line to the center of the square. (Fig. 3)

(Fig. 3)

- Overlap the two triangles and glue or tape them to form a triarama. (Fig. 4)
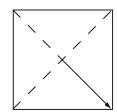
Finishing the project
- On a separate piece of paper draw four symbols that represent the United States, e.g., Liberty bell, US Flag, Mt. Rushmore, Washington Monument.
- Color the symbols.
- Glue them on the background of the triarama.
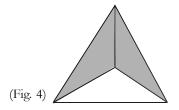- On the base of the triarama, write a description of "What America Means to Me."

(Fig. 4)

Rubric for Evaluating a Triarama

Category	4	3	2	1
Following Directions	Triarama contains all the components found in the model and is well constructed.	Triarama contains the components in the model, but is poorly constructed.	Triarama is missing some of the components in the model.	Triarama does not contain any of the components in the model.
Graphic/ Pictures	All the graphics are appropriate symbols.	Half of the graphics are appropriate symbols.	One of the graphics is an appropriate symbol.	None of the graphics is an appropriate symbol.
Attractiveness/ Organization	The triarama is exceptionally attractive and well organized, with appropriate color.	The triarama is attractive and well organized with some use of color.	The triarama is organized, but has no color.	The organization of the triarama is confusing.
Writing/ Grammar	There are no grammatical errors in the paragraph.	There are 1-2 grammatical errors in the paragraph.	There are 3-4 grammatical errors in the paragraph.	There are more than 4 grammatical errors in the paragraph.
Writing/ Organization	The paragraph has a clear beginning, middle, and end.	The paragraph has a beginning, middle, and end.	The paragraph has a beginning and middle, but no clear end.	The paragraph does not clearly show a beginning, middle, and end.

Synthesizing

Following are some additional rubrics that may be used to evaluate a number of synthesis projects.

Rubric for a Writing Assignment

Criteria	Always	Sometimes	Rarely
1. Sentence Formation • Uses complete sentences • Uses a variety of sentences			
2. Writing Mechanics • Uses proper capitalization • Uses correct punctuation • Uses correct spelling			
3. Word Usage • Uses descriptive language • Has proper subject/verb agreement • Uses appropriate adjectives/adverbs • Uses proper pronoun antecedent			
4. Composition Development • Uses correct format • Has a beginning, middle, and end • Stays on assigned topic • Uses transitional words (*since*, *because*, *however*) • Includes specific/relevant details (examples)			

Rubric for an Oral Report

Criteria	Yes	Sometimes	No
1. Did the student speak clearly?			
2. Did the student make eye contact?			
3. Did the student use correct grammar?			
4. Were the student's thoughts organized?			
5. Did the student include details in the presentation?			
6. Did the student make a conclusion?			
7. Did the student stay within the assigned time?			
8. Did the student use a model, if appropriate?			
9. If the student used a model, was it accurate?			

Rubric for Creative Project

Criteria	Yes	No
1. Did the student follow directions?		
2. Did the student complete the project by the due date?		
3. Did the student use color, if appropriate?		
4. Did the student replicate the idea (e.g., make a cornhusk doll)?		
5. Did the student show creativity (e.g., an original poem, song)?		