Teachers and Students Producing Together

Joint Productive Activity—Collaboration or Bust!

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I've learned that success in the workplace only comes from working in teams. You can't do it alone.

Heidi Miller, named one of the most powerful U.S. businesswomen by *Fortune* magazine

Joint productive activities are experiences that require people to work together collaboratively, depending on each other and using each person's expertise. We are all socially and culturally accustomed to this type of interdependent learning; this our natural way of being human. Unfortunately, the frequency of joint productive activities declines as children progress through school, so that by high school, it is uncommon. Yet in the twenty-first century, this interdependence is a requirement for our global society. This chapter explains why collaborative learning approaches are important with adolescent students and how these can succeed in the classroom. Teaching using joint activities is fundamental to many of the lessons presented throughout this book.

Joint productive activities can help teachers diversify the learning that takes place in high school classrooms. These activities can be accomplished in pairs, small groups, or the whole class as a group. They can be as simple as asking students in pairs to discuss a question during a lecture, a strategy referred to as ***think pair share*** or ***pair share*** throughout the book.[1] During a recent lecture in a tenth-grade world history class, the teacher was discussing the effects of the industrial revolution in Europe, Japan, and the United States. After every ten minutes of the lecture, she would ask students to turn to their partner and discuss a prediction, summarization, or clarification question such as, "What impact do you think the industrial revolution had on schools—on how students were educated?" The product was simply students sharing their ideas with each other.

This same teacher also had her class participate in a whole-group joint activity by having each student write a part of a class book titled *The Effects of the Industrial Revolution on Europe, Japan, and the United States.* The entire class had to contribute

a piece of the text to make it flow smoothly. They also had to work as a thirty-two-person team to create charts that compared and contrasted the effects on the different countries. Joint productive activities can occur within a short period of time, as evidenced in the pair share discussions. Conversely, they can take up large amounts of time and energy, as in the creation of the class book. The salient features are that joint productive activities require students to talk and work with each other on a product that is meaningful and leads to growth. The teacher is present to support students' development.

Joint activities can easily be implemented through the use of classroom learning centers, which are a series of different activities that occur simultaneously in the classroom. For example, one history teacher uses learning centers to teach students about the major world wars.[2] As you walk into his class, students are clustered in small groups, each working on a specific task related to one of the unit themes, such as the political, social, and economic ramifications of war. Learning centers allow teachers to create diversified learning experiences within a curricular unit. (The full implementation of learning centers is discussed in Appendix 1.)

Research Support for Joint Productive Activities

Provided that essential elements are in place, a number of research studies in K–12 classrooms, in very diverse settings and across many content areas, have shown that students engaged in joint productive activities (or cooperative learning groups) consistently benefit. They have higher academic test scores, greater comprehension of the content and skills they are studying, higher self-esteem, larger numbers of positive social skills, and fewer stereotypes of persons from different races or ethnic groups.[3]

When researchers Springer, Stanne, and Donovan analyzed collaborative, small-group instruction in math and science undergraduate college courses, they saw remarkable improvements in academic achievement, attitudes toward learning, and perseverance through college programs. They recommended the widespread implementation of this type of teaching.[4] It is no surprise, then, that several programs and models listed in the U.S. Secretary of Education's *High School Leadership Summit* emphasize cooperative learning projects, Socratic questioning between teachers and students, and collaborative, project-based learning activities.[5] Clearly, incorporating joint activities into classes is not only a service to our students but a gift to society.

Research on cooperative learning consistently demonstrates positive academic and social gains. August and Hakuta report that students who participate cross-racially increase their academic achievement, motivation, self-esteem, and empathic development.[6] Kagan notes, "The lowest achieving students and minority students in general benefit most, but the benefit obtained for the lower achievers is not bought at the

expense of the higher achievers; the high achieving students generally perform as well or better in cooperative classrooms than they do in traditional classrooms." Kagan further purports that improvements in ethnic relations were greater than any other outcome. Thus, the research points to the importance of incorporating joint activities into the curriculum.[7]

Working with Adolescents

Frequently teachers complain, "Let's be honest. Many of my high school kids hate working together. They are always fighting about something or with someone." It is true that joint productive activities can be fraught with conflict. All of life, in fact, can be full of conflict. One of the goals of joint productive activities is to encourage students to do what they do naturally outside the classroom walls: socialize, discuss, argue, agree, and arrive at resolution. Provided teachers have a clear, consistent classroom management system in place, students react positively and with much enthusiasm to joint activities (collaborative learning experiences). They especially appreciate the autonomy, the in-depth exploration of the subject matter, and the opportunity to work through different media such as the arts.

(For a more thorough discussion of management issues, see Appendix 1.)

During the 1998–2000 school years, at several northern California high schools, approximately 150 students in eight different classes were asked to complete a survey about their experiences with joint activities. Sometimes the activities were whole-group projects; other times, students were participating in small-group projects or engaged in learning center work. Overwhelmingly, the majority of students surveyed felt that they were learning about "real" things. As they made connections to their own lives, learning became more meaningful to them. In one survey form, a student commented, "I noticed people having conversations about the subjects and actually putting some intelligent thought into it!"

The students seemed to be connecting with each other and the material. When reflecting about a joint activity on slavery during the Civil War, a student wrote, "What I liked about this activity was the feeling the readings gave you. They described the slaves' feelings about how they were being treated. We actually discussed and imagined how we would feel if we were being treated like that. It wasn't just like reading my homework anymore. We're talking about people and their lives here."

The teachers of these classes began to experiment with collaborative activities and learning centers in order to increase student participation and motivation. As one teacher explains, they wanted to make school meaningful for their students. Teachers become enamored with joint activities when they observe students engaging in the activities: "When we saw Laura's students actually doing the activities, discussing the ideas, and coming up with thoughtful solutions to complex environmental problems, we were sold.

We decided to immediately revisit our next unit, reduce the time we spent lecturing, and increase the time students would be working on a project. The results are consistently gratifying. Students are turning in better work, asking thoughtful questions, and connecting with the material in a more engaged way. We feel like they are here, ready to work and be challenged."[8]

Creating Lessons with Joint Activities

In order to have successful joint productive activities, it is critical to have specific elements in place. Many teachers assume that they merely provide the directions and materials and then are able to spend some time grading homework papers while students work. This is a false assumption. In a joint productive activity, the teacher has a critical role and is integral to the learning process. The teacher is both a collaborator and a facilitator. The teacher acts more like a coach than a lecturer. However, since the teacher knows the material well, she becomes a valuable resource for the different groups.

For students to be successful at joint productive activities, they need the teacher to answer questions, clarify directions, offer content expertise, help mediate problems or conflicts, and model appropriate social and academic behaviors. The students can provide modeling and content knowledge for each other as well. However, they will only be able to take each other to a certain level of understanding and knowledge. It is the teacher who can often take them one step further into uncharted, unexplored territories of learning.

The teacher needs to introduce the students to the activity by clarifying the goals. Often the difference between a successful lesson and an unsuccessful one is the presence of a clearly defined goal and tangible learning objectives. Students must believe the work that they are doing is meaningful and relevant to their lives. They must have access to clearly defined instructions, know how the groups will be chosen, understand how they are going to be evaluated both as a group and as individuals, and be accountable for a debriefing or reflecting on the content and process of their work.[9]

The following elements are necessary for structuring successful joint activities:

- The teacher is present as a collaborator and facilitator.
- There is a clear goal with specific learning objectives.
- The product or project is meaningful and relevant.
- Instructions are clearly defined.
- Both individuals and groups have access to assessments.

By using *focus questions,* which serve as a guide to design, analyze, and evaluate activities, teachers can reflect on lessons that incorporate joint activities:[10]

Joint Activity Focus Questions

1. **What is the goal of the lesson within the thematic unit?**
2. **How are the students co-constructing a product and sharing responsibility in the process? What is each student's part? What is the teacher's part? What is the co-constructed product?**
3. **What role does conversation or dialogue play? What academic language and concepts are students expected to use as they work?**
4. **What new knowledge and skills are students acquiring?**
5. **What changes could be made to make the lesson stronger and more meaningful?**

Teachers can easily identify if they have defined a clear goal, requested a meaningful product, and required the application of academic language. They can also reflect on changes they might make to the lesson to increase its complexity or relevance.

Assessment of Joint Activities

The options for assessment of joint activities are vast and flexible; the key issue for teachers is to think about their goals and expectations, both academic and social, before beginning a unit. Teachers can use everything from journal entries to class presentations to end-of-unit tests to assess their students' knowledge of the new material. In addition, they can require students to use the newly acquired academic language in their written work.

Many teachers associate collaborative activities with undisciplined, loud, chaotic, unstructured instruction where students spend most of their time socializing with one another. In fact, joint productive activities require clear structures and procedures as well as defined learning objectives. If a teacher is concerned about what the students are learning in joint activities, the objectives can be assessed regularly by incorporating individual quizzes and exams into the unit. Throughout the chapter, different examples are provided.

Introduction to Laura Ianacone Taschek

Laura Ianacone Taschek is a high school teacher in Virginia. We met while she was completing her master's/credential program at a university in the San Francisco Bay Area. She was inspired to learn about the five principles outlined in this book and then committed to applying these principles to her teaching. Throughout the book, she provides examples from her own teaching that illustrate how to use the principles as a framework for crafting lessons as well as a tool for lesson analysis and self-reflection.

Laura has been teaching social science since 1997. She teaches a variety of classes, including world history, world geography, global issues, and freshman studies. Throughout her career, she has been inspired by a variety of teachers in the classroom. Some offered small, successful cooperative grouping strategies where students had real conversations and truly learned. Others used a more traditional whole-group approach, inspiring students with stories and interactive discussions. She states, "What I noticed about the latter was that these incredible conversations occurred with only a few of the students—those comfortable enough to pursue a discussion in a whole-group setting. The complacent, quiet, or beginning English Language Learner didn't participate with enthusiasm or deeply discuss the subject at hand."

Laura pondered how she could create an environment where her students were inspired and motivated to learn for themselves, for the good of humanity, and not just for the grade. She continues:

> In my Global Issues classes, there are limitless possibilities for topics: war, peace, international cooperation, and human rights—important life topics. But my students for the most part were unenthused, accomplishing only the minimum work required. Where was the enthusiasm? Why didn't my students share my excitement? The students pursued their schoolwork and participated in classroom discussions in a mechanical fashion. How can I reach my students' various learning and motivation levels?

These questions about teaching and learning brought Laura to a central question—"How can I make learning more meaningful to my students?"—which sparked a conversation that initiated the first joint activities and learning centers in her classroom. Learning center activities, based on a thematic unit, provide a successful format for implementing the five principles. Joint activities and learning centers offer students choice and flexibility. Students can work with their peers to determine the time line, focus of study, and solutions to complex problems. Laura testifies:

> The majority of my students look forward to the joint activities that are challenging, demand participation and sharing, tap into their experiences and knowledge, and teach academic concepts in a rigorous yet meaningful manner. They find them interesting and fun. They really enjoy working with their peers. The only complaint has been from a small, select group of students who find fault "with having to work and think." They state up front that they like to lay back and do nothing while the teacher talks. I believe the most effective instruction I can provide is to blend both joint activities in learning centers and direct instruction through mini-lectures.

So even during her lectures, Laura weaves in joint activities such as pair share. She discusses an important point and then turns to her students and asks them, with a partner, to discuss a pertinent question or concept.

Lessons from the Classroom

The following exemplary lessons illustrate how three different teachers designed and implemented joint productive activities in their classes. In the first lesson, students are asked to work in small groups to create a graphic organizer comparing and contrasting the author's use of figurative language to portray the setting in three pieces of literature. The second lesson requires students to work in teams to create an imaginary island that is geologically sound. This science lesson also asks students to reflect on their product as well as their team conduct. The final lesson occurs in Laura's world history class. Within the learning center structure, students design a castle. Then they are asked to evaluate what castles reveal about the political, economic, and cultural climate of the Middle Ages.

Lesson 1: Literature, Grade 10

Elva Hernandez has been teaching literature classes in the San Francisco Bay Area at Fairmont High School for the past decade. She enjoys doing group projects with her students because "it gives students the opportunity to use each other's expertise. They take pride in the completed projects whether they are literary analyses, letters to the author, or graphic organizers." She uses the joint activity focus questions to guide her planning and implementation of the lesson. Notice as you review this lesson how she has specific goals and the expectation for a clearly defined product that requires students to use the academic language of literary analysis.

Lesson: Time, Sequence, and Setting in Literature

Time Estimate: Two 53-minute class periods

Standards for Literary Response and Analysis

- Analyze and trace an author's development of time and sequence, including the use of complex literary devices such as foreshadowing and flashbacks.
- Recognize and understand the significance of various literary devices, including figurative language.[11]

Learning Objectives

1. Students will categorize the times, sequences, and settings of the following literature selections: *The Adventures of Huckleberry Finn* by Mark Twain, *Their Eyes Were Watching God* by Zora Neale Hurston, and *Ironman* by Chris Crutcher.[12] They will create a graphic organizer to arrange their ideas.
2. Students will analyze and evaluate how the author uses figurative language and symbolism to depict the setting.
3. Students will analyze how the setting deeply affects the plot and characters. How would the story have been different in a different setting?

Lesson Plan

1. In small groups of three or four, students work together to brainstorm the time, sequence, and settings of the literature selections.
2. The students create a graphic organizer, such as a chart, indicating the time frame, sequence, and type of environment in which the story takes place.
3. The students categorize their ideas.
4. The students discuss and take notes in order to analyze how the author uses figurative language and symbolism to depict the settings.
5. The students evaluate the effectiveness of the author's use of figurative language by discussing and taking notes about the following questions:
   - What was most effective?
   - Why do you think it was effective?
   - What didn't work?
   - Why wasn't it effective?
6. Students analyze how the setting affects the plot and characters. They discuss the following question and take notes: How would the story have been changed if the setting was different?
7. Next steps: After participating in the discussions and taking notes, students will write an essay. The essay will (1) document their ideas about the effectiveness of the author's use of figurative language to depict the setting and (2) evaluate the importance of the setting to the plot in each of these stories.

Conduct of Lesson

During the lesson, Elva rotates around the groups, answering questions, asking essential questions, solving a conflict, adding her own ideas, and prompting groups to think more deeply about their categories. There are a lot of open discussions and brainstorming of ideas. One group of students quickly gets to work categorizing their ideas as "Positive Features of the Setting" and "Negative Features of the Setting." Elva prompts them by requesting they consider the complexity of the three books. After discussing the similarities and differences in the stories, the group adds a category: "How the Characters' Lives Would Be Altered by a Change of Setting."

Commentary on Lesson

Elva comments, "Many students who would never dare raise their hand to speak in a whole-group lecture speak eloquently, clearly communicating their ideas to their peers." The students are required to collaborate, communicate, and work as a team. Every student brings an interesting perspective and contribution. Once the students start generating ideas, they seem to bounce off each other as the ideas take on a life of their own. One idea sparks another idea, which ignites a new discovery. By working together and

sharing their individual thoughts and perspectives, the students end up thinking about ideas that they would not have had if they had been working alone. The groups created complex, sophisticated categories such as "How the Sequence of Events Affects the Characters' Behavior," "Community Interventions to Clean Up the Environment," "How Time Is Portrayed with Flashbacks," and "Global Responsibilities for Creating Healthy Settings."

Elva expresses her gratitude at having the joint activity focus questions to use as a framework for creating her lessons: "I am a believer in collaborative work. However, by using the focus questions, I know I am using a better format to create my lessons. Now I consistently consider what I want my students to learn: the goals and objectives, product or project, the academic language, and the new concepts."

Lesson 2: Biology, Grade 9

This lesson was created by Jeffrey, a high school science teacher who has been incorporating joint productive activities and project-based learning into his science classes for several years. He features this activity as part of a year-long "Community and the Environment" unit. Jeffrey consistently has clear goals specifically related to standards-driven, academic content material.

Lesson: Create an Island

Time Estimate: Two days of 90-minute block periods

Standard in Biology

- Have students create an ecosystem and then explore how the stability in an ecosystem is a balance between competing effects.[13]

Learning Objectives

1. Students will collaborate to create an ecosystem.
2. Students will identify the factors that affect the distribution and characteristics of the ecosystem.

Lesson Plan

1. In introducing the activity to students, explain that the goal is to create an ecosystem.
2. Students draw an island (using colored pencils and paper) and then identify the factors that affect the distribution and characteristics of the ecosystem.
3. Provide a couple of examples of things that could affect an ecosystem, such as changing weather patterns or the introduction of a new species to the island.
4. Explain that the class will be broken into groups of four and that each person will be responsible for one quadrant of the group's island map.

5. The team must work together because the map has to fit together seamlessly. For example, is there to be a river on the island? You cannot have a river simply end in one quadrant. The river would have an impact on the geography and the distribution of resources in the other three quadrants.
6. Pass out the instructions in Handout 1.1, "Create an Island."[14]
7. The students self-select into groups of four.
8. The students reflect on the final product and their process in working together by using reflection questions, which are set out in Handout 1.2. They discuss the questions in their group and then write a report individually.

Conduct of Lesson

When I observed this activity in Jeffrey's classroom, the students immediately started shifting tables, moving chairs, and gathering paper, pencils, and colored pencils. A low murmur was heard throughout the room. The students began. Jeffrey helped sort out materials. He rotated around the room until every group had an idea of where they were headed. In one group, a couple of the students started sketching out a plan. But another student in that same group starting erasing what one student was drawing, stating emphatically, "We have to talk first! You guys, we can't just start drawing. We don't even know what we're doing!" There was a lot of bickering, drawing, erasing, and loud complaining: "Cut it out! Let me draw." "I wanna get this done!" "No, we need to talk first!" The person sketching tried to explain that she had a clear vision of the ecosystem. She just wanted to get started so that they could get the work done quickly. She had an after-school job and had to work until 11:00 P.M. She would not be able to do any homework after school. Another student chimed in, reminding her that the task would take longer if they did not talk first. He also clarified with Jeffrey that they had at least two days to complete the project and the reflection writing. Jeffrey pulled up a chair and listened intently. After everyone seemed to calm down, he occasionally asked a question or clarified a student's idea.

The other groups were not as wrought with conflict. Snippets of discussion revolved around placements of geographical features and populations of species as well as how possible fluctuations in population size would affect the terrain and energy pyramid. At the end of the ninety-minute joint activity, Jeffrey asked students to sit together, reflecting and taking notes about how their work was going.

Lesson Assessment

Students are assessed on their final products as well as the reflection questions in Handout 1.2. At the end of the project, Jeffrey administers a quiz testing students about salient vocabulary and concepts and requiring them to provide examples from their joint activity.

Handout 1.1

Create an Island: Student Instructions

Biology Standard and Learning Goal: "To create an Ecosystem"

- Explain the factors that affect the distribution and characteristics of an ecosystem.
- Analyze the diversity and productivity of an ecosystem.

Following this project, we will be doing research to explain the factors that affect the distribution and characteristics of our ecosystem. We will also analyze its diversity and productivity.

Instructions

In order to begin this study, we will be constructing (in groups of four) an island and all of its major geographical features.

Conditions: Read BEFORE you begin!

- Your island as a whole must contain at least one of each of the following perimeter features: an isthmus, a bay, a gulf, breakaway isles, a peninsula, and an inlet.
- Your island as a whole must contain at least one of each of the following geographical features: mountains, volcano, forest, lake, marsh, river, and a waterfall.
- You must distribute the population and natural resources according to the geographical features.
- Your map as a whole must contain: a compass rose, a key (for size and features), and the island's name.
- You may add any other features your entire group agrees to, if you wish.

Now follow these steps:

Step One: Put yourselves into groups of four people.

Step Two: Each person takes a piece of paper and a black pencil.

Step Three: Decide among yourselves who will be responsible for each quadrant of your island. One person can draw or be mainly responsible for the northwest quadrant, one person can draw or be mainly responsible for the northeast quadrant, and so on.

Step Four: Figure out a way to make sure that your perimeters will meet each other's correctly when you assemble your four quadrants together. Then assemble your island together (using tape on the back). Perimeters must meet precisely.

Step Five: Using colored pencils, add all of the required geographical features and map requirements to your island map.

The representation of the geographical features must be realistic, and they must coordinate (for example, rivers cannot flow uphill, marshes must have water, a river must have a source). Also, remember that geographical features do not limit themselves by quadrants. Coordinate with your group to have your features cross over your artificial lines.

Remember to coordinate your key so that you all use the same symbols and colors to mean the same things.

All members must agree to the island name. You must reach consensus.

Handout 1.2

Create an Island: Reflection Questions

- Describe your finished product. What are the most salient features of your ecosystem?
- Pick one feature of your ecosystem, and explain its impact on the geography and distribution of resources.
- What do you think are the most important factors that affect the characteristics of our ecosystem in our local area? What do you think are our local diversity and productivity?
- How do you think your team worked together? Please address what really worked well and what you could have done differently to make the process run better.
- Please write about your contribution and explain an issue you had to negotiate with your peer(s).

Jeffrey wants the students to be forced to communicate about how to make an island and consider the factors that affect the distribution and characteristics of an ecosystem. This is why he asks each person to complete only one quadrant. He is concerned about the issue of accountability. This activity blends group work with individual accountability. Using the "Create an Island" reflection questions, he requires the students to write about their contribution and state what issues they had to negotiate with their peers. For example, if they started building a mountain range in their quadrant, they had to discuss how the mountain would affect the island's ecosystem. How would this affect the stability of the producers and decomposers in the other quadrants? Jeffrey selects his joint activities carefully so that the product is created by the group, but students can be individually assessed and held individually responsible for their contribution.

Commentary on Lesson

Students learn more about ecosystems in the joint activity than they could have in a more conventional format. In a traditional lesson, students more than likely would listen to these important ideas presented in a lecture format. Later they would be tested on the material.

Within this joint productive activity, however, students engage in discussing their ideas, arguing about placement of geographical features, complaining about each other's placement of a mountain range or an isthmus because of the way it affects the terrain as well as population. They talk about salient features of their ecosystems, describe the distribution of resources, and predict what affects their own local ecosystem. In addition to memorizing the vocabulary for the test, they have to apply it in their writing and use it in their discussions.

Jeffrey comments, "An improvement to the lesson would have been to blend this activity with a more traditional lecture so that students would have more information to work with when they create their islands." Through a lecture that integrates a collaborative strategy such as pair share, students would have more data to apply to the construction of their ecosystem.

Lesson 3: World History, Grade 10

Laura Ianacone Taschek created the following activity as part of a Middle Ages unit in her tenth-grade world history class. In addition to teaching the unit through mini-lectures, she cycles students through various learning centers focusing on aspects of medieval European society and culture. At one of the centers, students watch a video about castles and are then given a set of questions to discuss collectively and answer individually. They are then involved in a collaborative castle-building activity, including development of a "defense plan" for the castle.

Lesson: Castle Building, Middle Ages Unit

Time Estimate: Four to five 60-minute class periods

World History Standards

- Students learn about the redefinition of European society and culture, 1000–1300 C.E.[15]

Learning Objectives

Students will be able to construct a castle and connect it to significant themes of the Middle Ages such as survival, war, the emergence and assimilation of different cultures, the rise of religion and its consequences, changing political systems, economic evolution, and artistic developments.

Lesson Plan

1. Students will view a video on castles and respond to the Castle Questions (Handout 1.3). They discuss the questions and responses as a team. Then each member writes up his or her own responses.
2. In their small groups, students design and construct a castle either out of actual building materials or as a sketch, using a computer drawing program or pen and paper (Handout 1.4).
3. The team creates a defense plan for their castle integrating concepts from the video as well as text and Internet resources.

Conduct of Lesson

Laura comments that she listens to students talk and work together as they begin the joint activity. She is impressed that they use newly learned knowledge of castle construction. They apply vocabulary to describe the parts of the castle, assist each other in the correct placement of castle parts, and describe how the construction of the castles added to the defense strategies. Using what they see in the castle video, with additional help from library books, the students reconstruct castles, with not only the towers, walls and courtyards, but also the murder holes and other specifically designed defense strategies. For an example of student work, see Appendix 2.

Consider this discussion among five students working on building a castle:

Student 1: What are we supposed to do?

Student 2: I dunno.

Student 3: I'll reread the directions. Listen this time!

Student 4: We have to draw it out first.

Student 2: I'd rather build it, then draw it.

Student 5: I think I did this in seventh grade. Do we really have to do this?

Student 3: Let's sketch it, then build it. Look, there are these books here. John, YOU check them out!

Handout 1.3
Castle Questions

Castles

As the era of the Middle Ages was wrought with conflict and change, there were many wars and battles that raged throughout the land. People began to build castles to house their families and servants and to protect them against the ever-changing enemy.

The first castles consisted of a motte and a bailey, the motte being a large conical mound with a flat top and the bailey being the land that was enclosed by a ditch (preferably filled with water). Entrance to the bailey was gained via a strongly defended gate and bridge that ran over the ditch (moat). There was also a tower that housed the owner, his family, and servants. It was frequently the last line of defense. The castles that we think of and see today were built up from the original motte and bailey timber design. Over time, stone replaced the timber. Much attention was given to the design and construction of the tower, the protective walls or enclosures, and the gatehouse for security purposes.

Part I

In your small group (of no more than four students), watch the video on castles and take notes by answering the following Castle Questions. Please discuss the questions collectively, but each person must submit his or her own answer sheet.

Castle Questions

1. Summarize the original castle design and construction.
2. Explain how it evolved from the early design to the sophisticated stone edifices that we see today in Europe.
3. Summarize the defense features.
4. Analyze in detail how these castles, which were built of stone, were subject to attack. What were the different strategies?
5. Please judge the strengths and challenges of these castles as structures of defense. How would you design them differently?
6. Compare this early military system to our system today.
7. Determine what castles reveal to us about the Middle Ages. What stories do they tell us about the life and times of the people: the political, economic, cultural, and religious climate?
8. How do the Middle Ages compare to the times we live in today?

Handout 1.4
Castle-Building Activity

Part II

1. Congratulations! You all have just been named lords and will soon begin building a castle. Unlike the architects of the Middle Ages, you have had the benefit of learning about more than one style of castle construction and defense before you begin to build. Using what you have seen and read, do *one* of the following:
   - As a group, *draw a detailed illustration of your own castle.* You should include the surrounding fief in your drawing. Label the sections of the castle, interior and exterior. Identify and label the sections of your castle that will protect you and your fiefdom from an attack. If needed, replay sections of the video or use the resources listed below.
   - As a group, *build a castle.* You should include the surrounding fief in your plan. Label the sections of the castle, interior and exterior. Identify and label the sections of your castle that will protect you and your fiefdom from an attack. If needed, replay sections of the video or use the resources listed below.
2. You are creating a miniature castle. Please establish a scale, and draw or build your castle accordingly. You will have access to the following materials: cardboard, poster board, glue, scissors, tape (masking and clear), markers, and acrylic paint. If needed, you may supply other materials. I suggest planning your design so that it takes no more than two or three class periods to complete the drawing or construction.
3. As a group or pair, write a one-page defense plan should your castle come under attack. Include terms you learned during the video/book work. How will you defend your castle against invaders?
4. Upon completion of your castle, the class will be voting on the best castle construction (including apparent defense strategies).

Good luck!

Resources

Gravett, C. (2000). *The Middle Ages* (Vol. 1). New York: Longman

Gravett, C., & Dann, G. (2004). *Castle.* New York: DK Publishing

http://www.castlewales.com/casterms.html

http://www.britannia

In the dialogue that follows, the students identify where the gates should be placed and why. They share their knowledge with each other through discussing and showing each other their ideas. They seem to be enjoying the project, each adding special touches and drawings to accompany the model castle. A few students explore the option to use computers to complete their projects.

Teacher: What's working?

Student 1: Learning how to work well in groups.

Teacher: How so?

Student 1: We are learning how to build a castle, and then we have to build one as a group. We are all working on different parts of the castle.

Student 2: We've got walls over here and archer rooms. I didn't know much about archer rooms; they figured out how to use angles so they wouldn't be shot at. Cool.

Student 3: We have a problem. The gate is not supposed to go all the way through; it is supposed to go around.

Student 4: It goes right underneath it.

Student 5: What it is . . . is the gate on the outside needs to be offset from the gate on the inside.

Student 3: That was so the attackers couldn't get right in; they had to go around.

Student 4: Like this one.

Student 2: No, it has to be the gate into here. So once the attackers got past the first gate defense, they had to do it again.

Student 5: Oh, that makes sense.

Student 1: Hey, who was fighting who? I don't really even know.

Student 2: One of us should look that up. I'll do it on the computer. It'll add to our design.

Student 3: I can do it at home on my dad's computer.

Student 5: Whatever. I think we should have something about who's fighting who now.

Student 1: What are you talking about?

Student 5: Duh—like this year. Like, have we been fighting about the same stuff since then?

Student 1: No, they fought about land.

Student 5: Oh yeah, like there aren't wars about land now?! Duh.

Student 3: Ms. Taschek, you want us to think about now, yeah?

Teacher: Yes, I like where you are headed. We do all fight about land. Could the issues have been similar for the people of the Middle Ages?

Lesson Assessment

Laura uses two primary forms of assessment during joint productive activities. First, she observes. She walks around, interacting with the students and asking questions about what they are doing. She states:

> I never forget the extremely social nature of the high school experience. When other teachers have observed my class, the most popular question they ask is: Are the students staying on task? I explain that I carry a clipboard with a class list. I jot down notes about who is doing what, who is on task, and who needs more support and guidance. I also jot down questions, insights, and reflections that arise. I make a point to talk to students individually.

The other way she ensures that students are staying on task is by implementing a second form of assessment. The day she passes out the information about center activities, she also passes out a rubric that explains to the students exactly what she expects of them and how they will be graded (Exhibit 1.1). The students are clear from the beginning about the goals and expectations for completing commendable work and participating in an exemplary manner.

Commentary on Lesson

Laura has students consider the following questions:

- What stories do castles tell us about the life and times of the people of the Middle Ages?
- How do the Middle Ages compare to the times we live in today?

By working with each other, students draw conclusions, make comparisons, create hypotheses, and build off each other's ideas. Laura wants her students to recognize that history unfolds as a series of tales of survival and adaptation. As one group of students concludes, "When you look at the negative aspects of our world—wars, economic problems, and religious persecution, and the positive aspects such as universities and the arts—the Middle Ages doesn't look that different from how life is today."

EXHIBIT 1.1. ASSESSMENT RUBRIC FOR THE CASTLE ACTIVITY

1. **Participation:** 50 points possible. This grade includes your participation in pairs or small groups while working on the centers in class. It also includes how much time you spent on task/activity (actually doing the task/activities) during the center work in class.

   50 points = always participating and working on task/activities
   40 points = frequently participating and working on task/activities
   30 points = moderately participating and working on task/activities
   20 points = occasionally participating and working on task/activities
   10 points = hardly participating or working on task/activities

2. **Activity/Task Work:** Total points possible (6×50) = 300 points
   50 points = Work reflects thoughtful, well-developed, and insightful answers. Summarized, clarified, or discussed the questions in each task/activity. When asked, provided examples from the text or your own life. Completed all sections of the task/activity. When asked, created excellent drawings, illustrations, or visuals for task/activity work. (As a group, each member contributed, which means there are full, complete answers for each question and a quality illustration. Don't rush your work. Don't forget to include all group members' names!)

   40 points = Briefer summary of main points/limited or short discussion of questions. Included some examples from the text and your own life. Illustrations or visuals included in task/activity work.

   30 points = Minimal response to questions in task/activity (one sentence or less). No illustrations completed.

   15 points = Task/activity incomplete. Only some of the questions are answered. No visuals or illustrations provided.

   0 points = Task/activity not complete.

3. **Presentation:** 30 points possible. Upon completion of the center work, small groups will prepare and present their work. (more details soon)

   Remember: EVERY POINT COUNTS!

   Total points possible: 380 points

   Total points: _____

Conclusion

Within the past two centuries, our economy has moved from an agricultural to an industrial to a global, technological, information management one. As teachers, we must prepare our students to deal with the onslaught of information and the ever-changing structures and systems within our interdependent world. Within the workplace, we must be able to work effectively in teams, solving complex problems that cannot be worked out alone. We live in the era of specialization. Each person is required to provide a piece of the solution. This requires cooperative collaboration.

The rate at which information is being processed has rapidly accelerated. This requires that students develop a different set of skills than they needed a decade ago. They used to memorize facts about a specific subject, be tested on their knowledge, and then receive a grade for their performance on a test. Now, by the time students complete the class and take the exam, the scientific or mathematical knowledge has been further developed and published. Questions such as "Why is this important to know?" "How do we know this to be true?" "How did we arrive at this conclusion?" and "What is the proof for this mathematical concept?" have become increasingly important. It has become critical for students to know the subject matter, effectively communicate their ideas, work as a team, make consensual decisions, and respect each person's knowledge and expertise. By integrating collaborative learning or joint activities into the classroom, we are providing our students with opportunities to practice communicating effectively, negotiating complex problems, and resolving conflicts.

Reflecting on the economic, political, and social milieu of our society demands that we commit to providing students with experiences in collaborative, cooperative learning. We want them to leave high school prepared with deep subject matter knowledge, an ability to reflect on their understanding and how they have come to know what they know, and strength in working cooperatively and peacefully with family members, peers, and coworkers.