

Intervention Taxonomy Brief: Promoting Adolescent's Comprehension of Text

The goal of this brief is to provide educators with information they can use to evaluate the appropriateness of **Promoting Adolescent's Comprehension of Text (PACT)** for a specific student or group of students who require supplemental and intensive intervention. The brief also may be used to guide decisions about the selection or purchase of a new intervention. We envision that the brief may allow users to examine the extent to which the program aligns to the Taxonomy of Intervention Intensity, a framework used by educators to categorize interventions along key dimensions. The information included in this brief is organized along the seven dimensions of the Taxonomy of Intervention Intensity and can assist educators in answering the following questions:

- Does evidence suggest that this intervention is expected to lead to improved outcomes in the identified area of need (**strength**)?
- Will the group size, duration, structure, and frequency provide sufficient opportunities for students to respond and receive corrective feedback (**dosage**)?
- Does the intervention match the student's identified needs (**alignment**)?
- Does the intervention assist the student in generalizing target skills to general education or other tasks (**attention to transfer**)?
- Does the intervention include elements of explicit instruction (**comprehensiveness**)?
- Does the student have opportunities to develop the behavior skills necessary to be successful (**behavioral support**)?
- Can the intervention be individualized with a data-based process to meet student needs (**individualization**)?

To learn more about the Taxonomy of Intervention Intensity and find resources to support implementation, visit <https://intensiveintervention.org/taxonomy-intervention-intensity>.

Program Summary

The PACT intervention is a set of instructional practices implemented daily within social studies. An overview of how these components are taught over the 10-day unit:

- *Comprehension canopy.* The comprehension canopy is designed to build background knowledge and motivation. On the first day, students watch a short high-interest video. Teachers provide a purpose for viewing (e.g., "As you watch the video, write two reasons why the colonists called it the First Continental Congress") and lead a discussion afterward. An overarching question is introduced to unify the theme (e.g., Was the American Revolution inevitable? Why?). Each subsequent lesson begins with a review of the question and discussion of how new information informs an answer to the overarching question. At the end of the 10-day unit, students answer the comprehension canopy question during a whole-class or small-group discussion.

- *Essential words.* A set of 4–5 high-utility, high-frequency concepts (e.g., revenue, petition) are taught and reviewed over the span of each 10-day unit. On Day 1, the teacher introduces each essential word using a student-friendly definition, visual representation, related words, sentences with the word in context, and question prompts for brief discussion of the word. Essential words are reinforced during warm-ups and are integrated into texts, comprehension checks, and knowledge application activities.
- *Warm-up.* Throughout the unit, lessons begin with a 5-min review of an essential word using an activity that requires students to apply the meaning of the word. For example, for the word revenue, students are shown a graph listing revenues and spending for the U.S. government and asked to describe the relationship between revenue and spending over the years.
- *Critical reading.* During critical reading sessions, students read and discuss information from primary and secondary sources of text related to the content in whole-class, small-group, paired, or individual reading arrangements. These grouping decisions are based on student need. Teachers engage students in classroom discourse and note taking that are designed to help students make connections to the comprehension canopy, essential words, and previously learned material. In addition, essential words are reviewed when they are used in text.
- *Team-based learning (TBL).* TBL provides students with opportunities to engage in text-based discussions and to provide text-based evidence to support ideas.
- *TBL comprehension checks.* TBL comprehension checks ensure understanding of content and provide teachers with data to guide subsequent instruction. First, students individually complete a brief quiz with no access to text or notes; this quiz is graded and provides an opportunity for individual accountability for content. Next, students complete the check again with their team members. For each question, the team must agree on the answer and provide evidence from the text to support the team’s decision. Scratch-off answer sheets are provided to teams for immediate feedback on accuracy. If the team scratches the correct answer a star is revealed. If the answer is incorrect, there is no star and the team returns to discuss the question using text sources to select an alternative answer. Scratch-off cards are available at <http://www.epsteineducation.com/home/about/> and cost less than 20 cents each.
- *TBL knowledge application.* At the end of the unit, students work in heterogeneous teams to complete a TBL knowledge application activity designed to apply and extend understanding of content learned from text and prior discourse by articulating new perspectives, solving problems, and presenting conclusions. For example, students may be given a set of cards with causes of the Revolutionary War. They must compare two at a time and decide which is a more compelling cause. They continue this process until they end up with the most compelling cause of the Revolutionary War. Students are then asked to write a paragraph explaining their choice.

Table 1. Program Information

Features of program implementation	Program recommendations
Grade level(s)	8th grade
Group size	Whole class of 15 or fewer students
Intervention length	Duration of school year
Frequency	daily; 5 days per week
Session duration	45-minute class periods
Cost	Free of charge; contact the Meadows Center for Preventing Educational Risk at 512-232-2320 for more information
Training	Teachers complete 10 hours of training at the start of the year

Evidence of Taxonomy of Intervention Intensity Dimensions

The following section presents definitions for the Taxonomy of Intervention Intensity dimensions and a summary of intervention-specific evidence for each dimension. The evidence comes from the intervention’s vendor or developer. It is accurate as reported to the National Center on Intensive Intervention (NCII); it was not independently verified by NCII. Additional program evidence can be found on the [NCII Tools Chart](#) and might appear on the [What Works Clearinghouse](#). For specific questions about the content, contact the publisher at 512-232-2320.

Taxonomy Dimension: Strength

Strength tells us how well the program works for students with intensive intervention needs, expressed in terms of effect sizes. Effect sizes greater than 0.25 indicate an intervention has value in improving outcomes. Effect sizes of 0.35 to 0.40 are moderate, and effect sizes of 0.50 or larger are strong (preferred).

Exhibit 2 provides the effect sizes for students in need of intensive intervention organized by domain and subdomain. These effect size data are calculated on low-achieving participants, those falling at or below the 20th percentile on pretest measures of achievement. If available, additional effect sizes for disaggregated data can be found on the NCII Tools Chart.

Exhibit 2. PACT Effect Sizes for Students ≤20th Percentile by Domain and Subdomain

Domain	Subdomain	Outcome measures	Effect size ^a
Social Studies	<ul style="list-style-type: none"> ▪ History ▪ Social Studies 	MASK Knowledge Acquisition	Unavailable
Social Studies	<ul style="list-style-type: none"> ▪ History ▪ Social Studies 	MASK Reading Comprehension in Social Studies	Unavailable
Social Studies	<ul style="list-style-type: none"> ▪ History ▪ Social Studies 	MASK Vocabulary Recall	Unavailable
English Language Arts (ELA)	<ul style="list-style-type: none"> ▪ Reading Comprehension 	Gates-MacGinitie Reading Comprehension	Unavailable
ELA and Social Studies	<ul style="list-style-type: none"> ▪ Reading Comprehension ▪ History and Social Studies 	STAAR (State of Texas Assessment of Academic Readiness—Social Studies)	Unavailable

^a To ensure comparability of effect size across studies, NCII uses a standard formula to calculate effect sizes across all studies and outcome measures—Hedges *g*, corrected for small-sample bias.

Taxonomy Dimension: Dosage

Dosage is the number of opportunities a student has to respond or practice and receive corrective feedback. Dosage may be impacted by the size of the instructional group, the number of minutes each session lasts, the number of student-teacher interactions built into lessons, and the number of sessions provided per week.

Assuming a group size of 15 students, each student in the group has an estimate nine opportunities to respond and receive corrective feedback during each class period.

Taxonomy Dimension: Alignment

Alignment (Exhibit 3) focuses on how well the program (a) addresses the target student’s full set of academic skill deficits, (b) does not address skills the target student has already mastered (extraneous skills for that student), and (c) incorporates a meaningful focus on grade appropriate curricular standards.

Exhibit 3. Alignment With Content Areas Addressed

Instructional grade level(s)	Content area addressed	Skill strands
Grade 8	<ul style="list-style-type: none"> ▪ History ▪ Social Studies 	Social Studies Content Knowledge
Grade 8	<ul style="list-style-type: none"> ▪ History ▪ Social Studies 	Comprehension of Social Studies Text
Grade 8	<ul style="list-style-type: none"> ▪ History ▪ Social Studies 	Social Studies Vocabulary
Grade 8	<ul style="list-style-type: none"> ▪ ELA 	General Reading Comprehension

Taxonomy Dimension: Teaching to Promote Transfer

Attention to transfer is the extent to which an intervention is designed to help students (a) transfer the skills they learn to other formats and contexts and (b) realize connections between mastered and related skills.

For identifying the main idea (instructional target), three activities designed to explicitly teach for transfer are critical reading of text, team-based learning comprehension checks, team-based learning knowledge application.

Activity 1: Critical Reading of Text. Critical reading of texts targets the transfer of comprehension strategy instruction from teacher modeling to independent student use. Through reading and discussing primary and secondary source documents directly related to the social studies curriculum, students engage in discourse, notetaking strategies, and active questioning to comprehend vocabulary, events, and themes of the text. Students also learn to cite text evidence to support their claims. The building of such skills through whole-class instruction, small-group practice, student pairings, and then individual practice allows students to transfer their learned

comprehension strategies to novel, social studies texts. Students also may transfer the skill of citing text evidence to support claims to discussions in other subject areas.

Activity 2: Team-Based Learning Comprehension Checks. These checks target the transfer of skills from applying acquired knowledge to general reading comprehension by applying evidence. First students complete a brief quiz individually with no access to text or notes to provide an opportunity for individual accountability for content. Next, students complete the check again with their heterogeneous team members by agreeing on the answer and providing evidence from the text to support the team’s decision. The opportunity to work with a team supports the transfer of applying content knowledge to comprehension during novel comprehension checks.

Activity 3: Team-Based Learning Knowledge Application. This application targets the transfer of content knowledge and vocabulary to comprehension of social studies events. Using acquired knowledge from the current and previous units, students work in groups to apply new perspectives, solve problems, and present conclusions to historical dilemmas and learned unit-based materials. Students work together to write a paragraph to explain their choice. By applying knowledge as a team, students work on transferring and applying their content knowledge and vocabulary to subsequent, novel social studies learning. Students also learn how to justify the answers by using text evidence, a skill that can be transferred to building and defending arguments in other subject areas.

Taxonomy Dimension: Comprehensiveness

Comprehensiveness is the number of explicit instruction principles the intervention incorporates (e.g., providing explanations in simple, direct language; modeling efficient solution strategies instead of expecting students to discover strategies on their own; providing practice so that students use the strategies to generate many correct responses; and incorporating systematic cumulative review). Additional information can be found within the [NCII Explicit Instruction course content materials](#).

Dimension: Provide Directions in Clear, Direct Language

Activity 1: Essential Words (Exhibit 4). A set of four or five high-utility, high-frequency concepts (e.g., revenue, petition) are taught and reviewed during the span of each 10-day unit. When teaching the words, the teacher uses direct language to explicitly name the word, provide clear and concise examples, and set up a turn-and-talk.


Activity 2: Comprehension Canopy (Exhibit 5). At the start of the activity, the teacher gives clear directions to students for guiding questions to consider during the activity. Because the subsequent lessons are related to the Comprehension Canopy’s guiding questions, the clear language and precise directions are crucial to students integrating new information later on.

Exhibit 4. Essential Words Example

Essential Word
Colonial America

dissenter

Someone who disagrees with majority opinion or established belief



Related Words: *protestor, objector, nonconformist*

Example Usage:
Thomas Hooker, a religious **dissenter**, founded the colony of Connecticut after disagreeing with Puritan leaders in Massachusetts.

Example: *An eighth-grader who tells his parents he doesn't want to go to church with them anymore*

Nonexample: *An eighth-grader who has the same religious beliefs as his parents*

Turn and Talk:
Who in your life would you consider a **dissenter**? What makes this person a **dissenter**?

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Exhibit 5. Comprehension Canopy Example

Comprehension Canopy Routine 7–10 minutes

Materials
Springboard image: "Join, or Die" political cartoon

Introduction and Prior Knowledge

In this unit, we will learn about the growing tensions between the colonists in America and their British rulers in America and England. We will see the sequence of events that led the colonists to declare independence, even though they knew it would lead to a war they might not win. Finally, we will learn about how the colonists won the Revolutionary War.

Springboard

- Introduce the springboard activity.

Political cartoons have been used for more than 250 years to make an argument, express an opinion, or present a point of view. In their early days, political cartoons were posted on walls or passed from person to person.
- Display the "Join, or Die" political cartoon.

This political cartoon, created by Benjamin Franklin, was the first one published in an American newspaper. It appeared in the "Pennsylvania Gazette" in May 1754. Let's figure out its message.

What image do you see?
- Guide students to the answer: a snake that is fragmented, or in pieces.

Correct, you see a snake that is fragmented, or in pieces.

Notice that each fragment has an initial next to it. What do you think those initials mean?
- Guide students to the answer: the colonies—South Carolina, North Carolina, Virginia, Maryland, Pennsylvania, New Jersey, New York, and N.E. for the New England colonies.

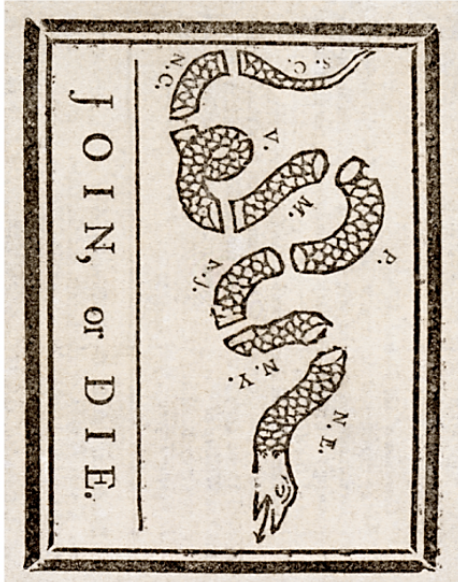
The image of the snake symbolizes the colonies.

In a political cartoon, words add meaning to the image. The words in this cartoon form the phrase, "join or die." Benjamin Franklin intended for that phrase to add meaning to the image of the snake.
- Prompt students to begin a "turn and talk" activity.

Discuss with your partner the message that Benjamin Franklin wanted to convey in this cartoon.

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Comprehension Canopy
The American Revolution



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Dimension: Gradually Fade Support
Activity 1: Warm-Up. Throughout the unit, lessons begin with the teacher leading a 5-minute review of an essential word using an activity that requires students to apply the meaning of the word (Exhibit 6).

Exhibit 6. Warm-Up Example

Warm-UpColonial America • Lesson 8

dissenter
Someone who disagrees with majority opinion or established belief

tolerance
Acceptance of ideas that are different from one's own

Below is a list of famous colonists. Use this list to fill in the blanks in the sentences that follow. The first one is completed for you. Each name should be used only once.

Famous Colonists

Ann Hutchinson	John Winthrop	Roger Williams
Thomas Hooker	King George III	William Penn

1. John Winthrop was a Puritan leader in the Massachusetts Bay colony who showed little religious **tolerance** and punished **dissenters**. In contrast, William Penn, the founder of Pennsylvania, believed in the Quaker ideal of religious **tolerance**.
2. _____, the father of the Fundamental Orders of Connecticut, believed that the people must agree to be governed. _____, on the other hand, believed that leaders have a natural right to rule.
3. _____ was a religious **dissenter** who was banished from the Massachusetts Bay colony. Similarly, _____ was banished from the Massachusetts Bay colony for criticizing the Puritans. The two of them moved on to establish Rhode Island.

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Activity 2: Critical Reading. Students read and discuss information from primary and secondary sources of text related to the content in whole-class, small-group, paired, or individual reading arrangements. Teachers engage students in classroom discourse and note taking that are designed to help students make connections to vocabulary, unit themes, and previously learned material (Exhibit 7).

Exhibit 7. Critical Reading Example

<p>1 of 2 The American Revolution • Lesson 2</p> <p style="text-align: center;">Letter From Benjamin Franklin</p> <p>(1) January 6, 1766 Sir, I have attentively studied the paper you sent me, and I am of opinion that the measure it proposes, of a union of Great Britain with the colonies, is a wise one.</p> <p>(2) However, Britain holds back the colonies in every branch of commerce that she thinks interferes with her own; she drains the colonies, by her trade with them, of all the cash they can make by every art and industry in any part of the world; and thus keeps them always in her debt. While these circumstances continue, is it still necessary or wise to tax the colonies, in a Parliament wherein they have no representative? And are the colonists to be thought unreasonable and ungrateful if they oppose such taxes?</p> <p style="border: 1px dashed black; padding: 5px;">What is Benjamin Franklin's complaint?</p> <p>(3) How, they say, shall we show our loyalty to our gracious King, if our money is to be given by others, without asking our consent? And, if the Parliament has a right to take from us a penny for every pound, where is the line drawn, and what shall keep Parliament from demanding, whenever they please, for the rest of the pound?</p> <p>(4) Have we then anything that we can call our own? It is more than probable that bringing representatives from the colonies to sit and act as members of Parliament would in a little time remove these objections and difficulties and make the future government of the colonies easy; but, until some such thing is done, I do not believe that any taxes levied by Parliament will ever be collected, but such as must be stained with blood. I am sure the profit of such taxes will never be worth the expense of collecting them and that the respect and affection of the Americans to Britain will in the struggle be totally lost, perhaps never to be recovered.</p> <p style="font-size: small;">© 2015 The Meadows Center for Preventing Educational Risk, The University of Texas at Austin The PACT and PACT Plus research teams from The University of Texas at Austin, Florida State University, and Texas A&M University developed these materials with funding from the Institute of Education Sciences (R305E100013) and Office of Special Education Programs (H254P150014).</p>	<p>"Letter From Benjamin Franklin" • 2 of 2 The American Revolution • Lesson 2</p> <p>(5) In my own private judgment, I think an immediate repeal of the Stamp Act would be the best measure for this country. The repeal would fill them with joy and gratitude, re-establish their respect and veneration for Parliament, and restore at once their ancient and natural love for this country and their regard for everything that comes from it.</p> <p>I am, with much esteem, your obliged friend,</p> <p>B. Franklin</p> <p style="font-size: x-small;">Adapted from Most, F. L., & Jorgenson, C. E. (1936). <i>Benjamin Franklin: Representative selections, with introduction, bibliography, and notes</i>. Project Gutenberg eBook retrieved from http://www.gutenberg.org/files/35508/35508-h/35508-h.htm</p> <p style="border: 1px dashed black; padding: 5px;">What does Benjamin Franklin fear the new taxes will cause?</p> <p style="border: 1px dashed black; padding: 5px;">If the British government had listened to Benjamin Franklin, could war have been avoided? Why or why not?</p> <p style="font-size: x-small;">© 2015 The Meadows Center for Preventing Educational Risk, The University of Texas at Austin The PACT and PACT Plus research teams from The University of Texas at Austin, Florida State University, and Texas A&M University developed these materials with funding from the Institute of Education Sciences (R305E100013) and Office of Special Education Programs (H254P150014).</p>
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Dimension: Ensure That Students Have Adequate Background Knowledge and Skills

Activity 1: Essential Words. A set of four to five high-utility, high-frequency concepts (e.g., revenue, petition) are taught and reviewed during the span of each 10-day unit. The words set students up with background knowledge on key vocabulary of the unit.

Activity 2: Comprehension Canopy. The comprehension canopy is designed to build background knowledge and motivation. Using the guiding question from Comprehension Canopy, each subsequent lesson begins with a review of the question and discussion of how new information informs an answer to the overarching question.

Dimension: Provide Practice

Activity 1: Team-Based Learning Comprehension Checks (Exhibit 8). First, students complete questions individually with no access to text or notes to provide an opportunity for individual accountability for content. Next, students complete the check again with their heterogeneous team members by agreeing on the answer and providing evidence from the text to support the team's decision.

Exhibit 8. Comprehension Check Example

Team-Based Learning • 1 of 2 Colonial America • Lesson 7

NAME(S) _____

Comprehension Check #2

Individual Directions: Mark your answer to each of the following questions.

Team Directions: For each question, (1) read, (2) discuss, (3) justify your answer, and (4) scratch off your card.

11. The House of Burgesses, Mayflower Compact, and Fundamental Orders of Connecticut represent the beginnings of _____ in the American colonies.

- A Religious freedom
- B Representative government
- C Mercantilism
- D Cargo ships

Team Explanation of #11: Why is ____ the correct answer?

12. One thing **all the colonies** had in common is that they:

- A Established governments that had equal representation for all people
- B Gained wealth by buying, selling, and trading for goods in the triangle trade
- C Protected religious freedom and insisted upon religious tolerance
- D Wanted to break free from the control of the King of England as soon as possible

13. Which of the following is true about the **southern colonies**?

- A Colonists set up mid-sized farms and grew cash crops like grains, fruits, and vegetables.
- B As part of the triangle trade, guns and cloth were traded for slaves in these colonies.
- C The economy and colonial governments were controlled by a small, wealthy planter class.
- D Slaves made up a small percentage of the overall population.

14. Which of the following pairs of people would be considered religious dissenters?

- A Pocahontas and John Rolfe
- B William Penn and John Smith
- C Thomas Hooker and King James III
- D Ann Hutchinson and Roger Williams

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Activity 2: Team-Based Learning Knowledge Application. Students work in groups to apply new perspectives, solve problems, and present conclusions to historical dilemmas and learned unit-based materials. Students work together to write a paragraph to explain their choice (Exhibit 9).

Exhibit 9. Knowledge Application Example

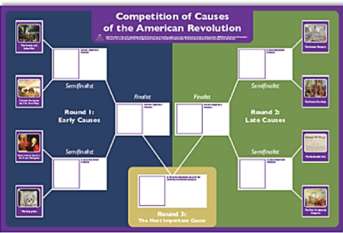
Unit 2: Road to Revolution

Knowledge Application Preview

Was the American Revolution inevitable? Why or why not?



Cause Cards



Competition of Causes Poster

Dimension: Incorporate Systematic Cumulative Review

Activity 1: Team-Based Learning Knowledge Application. Students work in groups to apply new perspectives, solve problems, and present conclusions to historical dilemmas and learned unit-based materials. Students work together to write a paragraph to explain their choice.

Activity 2: End-of-Unit Test. Students end each unit with a unit assessment. They prepare for the unit assessment with a full day of team-based learning activities to summarize the unit, discuss key vocabulary, and make additional connections.

Taxonomy Dimension: Behavioral Support

Behavioral support addresses the extent to which the program incorporates (a) self-regulation and executive function components and (b) behavioral principles to minimize undesired behavior. Additional information can be found within the [NCII behavioral support course content](#).

Activity 1: Comprehension Canopy. During this activity, students must self-monitor their engagement to seek information related to the guiding questions. Students engage in note-taking strategies to prepare them for the remainder of the unit.

Activity 2: Critical Reading. Students engage in self-monitoring strategies, such as annotating while reading, to discuss information from primary and secondary sources of text related to the content in whole-class, small-group, paired, or individual reading arrangements. Teachers engage students in classroom discourse and note taking that are designed to help students make connections to vocabulary, unit themes, and previously learned material.

Activity 3: Essential Words. A set of four to five high-utility, high-frequency concepts (e.g., revenue, petition) are taught and reviewed during the span of each 10-day unit. Students use an essential word tracker during the process and are taught how to refer to the tracker as well as how to keep it organized to support them during the unit.

Additional Information About PACT

Evidence suggests that content approaches to reading framed within a text-processing view of comprehension that focuses on content in the text as the vehicle for instruction can be effective in the general classroom and among readers who are struggling but included in general education social studies classes. *PACT* focuses on reading text to gather new information and then integrating these new ideas with previous learning through building background knowledge, discussion, summarization, and questioning. Designed from the content learning model, *PACT* improves understanding while reading text and provides opportunities for students to connect new learning to previous learning. *PACT* has been validated through more than 10 experimental and quasi-experimental studies providing evidence of its efficacy among students without disabilities, students with disabilities, English learners, middle school students, and high school students.