

TEACHING THAT MAKES SENSE

# Learning Patterns

*Content-Neutral Cross-Curricular  
Teaching Strategies For Every Classroom*

by  
**Steve Peha**



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*“Learning begins with teaching that makes sense.”*

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We provide support to teachers and learners using the most sensible methods and materials available. Our goal is to increase academic achievement by making teaching easier for teachers and learning more meaningful for kids.

You can learn more about *Teaching That Makes Sense* by visiting our website at [www.ttms.org](http://www.ttms.org).



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# Learning Patterns™

## Content-Neutral Cross-Curricular Teaching Strategies For Every Classroom

*Achieve gains in instructional efficiency and student achievement  
of 50%-500% over traditional teaching techniques  
with students of all grade and ability levels in all subject areas.*



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# Notes

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**Learning Patterns™ maximize student achievement  
through the delivery of essential knowledge and skills,  
and reduce teacher workload by optimizing instruction.**

Imagine a structure 13 years tall, 180 days wide, and five subjects deep. This is a K-12 education. Each cell in this structure represents a single class period in a single subject for a total of 11,700 educational opportunities. Learning Patterns™ reduce this academic load, simplify planning and instruction for teachers, and raise student achievement as a result. I developed this idea because I needed tools for teaching in any subject or grade without preparation. Learning Patterns are now in use around the world, albeit on a rather small scale.

By analyzing standards documents and my own teaching, I have identified underlying commonalities in learning targets across the curriculum. These commonalities represent dozens of potential assignments that can be taught and learned through a single foundational skill.

Consider exposition. Students consume and create expository information in many ways: they read expository texts, write expository essays, create reports, answer test questions, etc. As varied as expository expression can be, it has a simple structure that can be rendered into a single Learning Pattern. This pattern can be used by both teachers and students whenever expository skills are needed.

Some Learning Patterns cover skills like narration, exposition, and persuasion. Others help teachers and students with things like assessment, reading comprehension, and memorization. After learning a single pattern, students are prepared to handle numerous instances of it in any grade level or subject area.

Learning Patterns are readily scaleable. Each pattern can be explained in a single page, implemented without training, and disseminated electronically at no cost. Students using Learning Patterns rapidly develop foundational skills. After repeated uses, they internalize the patterns, learn to recognize their instances, and eventually no longer need the patterns as scaffolds. Teachers using a single pattern have reported test score improvements as high as 20% in a single year. Teachers using multiple patterns have achieved gains as high as 40%.

Learning Patterns could radically alter education. If they became a standard aspect of teacher training, were broadly incorporated into popular textbooks, and were freely available over the Internet, their widespread use would have a significant impact on the efficiency and effectiveness of teaching and learning. The ubiquity of Learning Patterns would also transform the traditional scope-and-sequence metaphor of curriculum into something more powerful and more appropriate for educating large populations of highly diverse learners.



Steve Peha

President, Teaching That Makes Sense

# Writing Pattern Reference



Teaching That Makes Sense  
[www.ttms.org](http://www.ttms.org)

# Draw-Label-Caption™

**1. Draw first; label second; caption third.** Work fast. It's not an art project.



I'm throwing the Frisbee with my dog.

**2. Make sure the caption captures the scene.** Work hard to make these few words convey the most important information to your readers.

- **Good.** I'm throwing the Frisbee with my dog.
- **Better.** As I turn to the throw the Frisbee, a huge gust of wind blows up.
- **Best.** No matter how windy it is, my dog still loves catching the Frisbee. But as I turn to throw it, a huge gust blows up that almost knocks me over, and I think for a minute that it might carry him away when he jumps in the air.

**3. Turn labels into sentences.** Any word or phrase can become a sentence.

- **Birds.** The birds can hardly fly because the wind is so strong.
- **Trees.** They're flopping all over the place.
- **Wind.** A huge gust almost knocks me over.
- **Dog.** His tail is wagging and he's full of energy.

**4. Turn sentences into paragraphs.** Add new material as it comes to you.

No matter how windy it is, my dog still loves catching the Frisbee. But as I turn to throw it, a huge gust blows up that almost knocks me over, and I think for a minute that it might carry him away when he jumps in the air. His tail is wagging and he's full of energy. But I'm looking at the trees in the distance. They're flopping all over the place. The birds can hardly fly. Even with all the energy in the world, I don't think my little dog has much of a chance.

# Chaining

**1. Write sentence after sentence like links in a chain.** Take the best part of the first sentence and use it to write a second sentence:

SENTENCE #1	LINK (Best Part)	SENTENCE #2
My dog can do the most amazing things.	amazing things	If I throw a Frisbee, he can catch it in his teeth.
If I throw a Frisbee, he can catch it in his teeth.	catch it in his teeth	He snags it out of the air like a wild beast attacking his prey.
He snags it out of the air like a wild beast attacking his prey.	like a wild beast	It reminds me of those shark attack shows I've seen on TV.

**2. In addition to “best part” chains, you can also create “question” chains.** Think of a question a reader would ask and answer it.

SENTENCE #1	LINK (Question)	SENTENCE #2
I had a hard time training my dog to catch a Frisbee.	Why was it hard?	At first, when I threw it, he would just sit there.
At first, when I threw it, he would just sit there.	What did you do?	[So] I ran with the Frisbee and a treat in my hand and made him jump for it.
[So] I ran with the Frisbee and a treat in my hand and made him jump for it.	Did it work?	A week later, he could catch it if I threw it ahead a few feet.

**3. You can even chain paragraphs.** Make the next paragraph about the best part of the previous paragraph. Or create a paragraph that answers a question your reader might have.

# Detailing

**1. A detail is the answer to a question a reader might have.** To add details, think of the questions readers might have about what you've written:

WHAT YOU'VE WRITTEN	QUESTIONS READERS MIGHT HAVE
As I leaned over the cliff, I saw my dog, Gepetto, dangling there, 100 feet above the rocks below, terrified, trying to hold his grip by clawing at the frail branches of a tiny tree.	How did he get like that? Did he fall to the bottom? What did you do to help him? How did you feel?

**2. Use the Idea-Details strategy to add support.** Read over what you've written. Pick the best sentence or phrase and add to it.

IDEA	DETAILS
As I leaned over the cliff, I saw my dog, Gepetto, dangling there, 100 feet above the rocks below, terrified, and trying to hold his grip by <u>clawing at the frail branches</u> of a tiny tree.	The branches were just twigs, hardly more than a quarter inch thick, cracking and tearing each time he struggled to climb up. I couldn't imagine how they were supporting his weight.

**3. Use the Tell-Show strategy to add descriptive "showing" detail.** Showing is more specific; it helps readers make pictures in their mind.

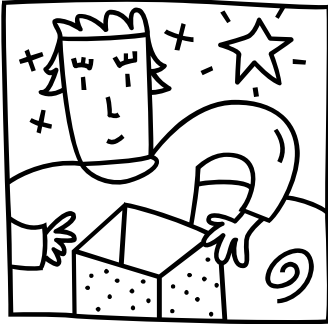
TELL	SHOW
I was scared.	I froze on the spot. I felt my heart race and my breathing quicken, but I couldn't move. I tried to yell for help but nothing came out.

**4. Use the Detail Categories strategy for the widest range of options.** Generate details by thinking of categories like the following:

- Questions
- Sights
- Objects
- Explanations
- Actions
- Sounds
- Descriptions
- Attributes
- Thoughts
- Feelings
- Examples
- Etc.

# Action-Feelings-Setting

**1. Start with a picture of yourself doing something.** Draw or make a picture in your mind. What are you doing? How do you feel? Where are you?



**Action.** I'm opening a present. I saved this one for last because I think it's the one I wanted most.

**Feelings.** I'm excited because it looks like the game console I wanted.

**Setting.** It's Christmas morning. There's torn paper all over the livingroom. My whole family is watching.

**2. Improve the action with the Idea-Details strategy.** Put the "action" on the left. On the right, add details in a bullet list.

IDEA	DETAILS
I'm opening a present.	<ul style="list-style-type: none"><li>• Struggle with the ribbon.</li><li>• Rip into the paper.</li><li>• Look for words on the box.</li></ul>

**3. Use the Tell-Show strategy to "show" your feelings.** To show your feelings, instead of telling about them, describe how you looked at the time.

TELL	SHOW
I'm excited.	<ul style="list-style-type: none"><li>• My hands are shaking.</li><li>• My heart is pounding.</li><li>• I start to sweat.</li></ul>

**3. Put it all together.** Use your pre-writing to get started. Make changes. Move things around. Leave things out. Add new stuff. Make it sound great.

Christmas morning. Paper all over the livingroom. My family watching me as i unwrap my last present. It's the game cosole I asked for.

My hands shake as I struggle with the ribbon. My heart is pounding. I rip into the paper and look frantically for words on the box. Nothing. I start to sweat. It's a plain white box. Oh no! I can't believe it! It's a sweater.

# Great Beginnings

## 1. Get your readers' attention and make them want to read more.

Work fast. You've got ten seconds to hook your readers and reel them in.

- **Example.** Mr. Simmons didn't know that when he got on the bus that morning, he wouldn't get off.
- **Example.** The Mariners pulled off a crazy come-from-behind victory last night to take first place.

## 2. Base your beginnings on successful models. Look at the kinds of beginnings other writers use and try their techniques in your own writing.

- **Question.** What would happen if you ate every meal at McDonald's for a month?
- **Description.** Dust and dirt were everywhere. Cobwebs clung to the corners. But it was home. For now.
- **Action.** He raced down the stairs, flew out the door, hopped on his bike, and hit the road.
- **Sound.** Beep, beep, beep, beep. The alarm chirped. But I was sound asleep and didn't hear it.
- **Dialog.** "What do you mean we're not going to Disneyworld!" my sister screamed.
- **Feelings.** I had never been so terrified in my life. I still get goosebumps thinking about it.
- **Thoughts.** Ooops! I'm in trouble now, I realized, as I surveyed the broken glass on the kitchen floor.
- **List.** Sore muscles, mosquito bites, no video games. That's what camping means to me.

## 3. Combine strategies for richer beginnings. It's good to try more than one beginning for a piece. Sometimes, you can even put them together.

- **Thoughts.** It's odd to be so hungry, I thought to myself, especially after eating those nine burritos.
- **Description.** Light flooded the dark kitchen and cool air hit my face as I bent down to peer inside.
- **Question.** Would I find the tasty snack I was looking for, or had someone cleaned out the fridge?

### Three Beginnings Combined

Light flooded the dark kitchen, and cool air hit my face as I bent down to peer inside. Would I find the tasty snack I was looking for, or had someone cleaned out the fridge? It's odd to be so hungry, I thought to myself, especially after eating those nine burritos. But here I was looking for a tenth.

# Happy Endings

**1. Wrap things up and give your readers something to think about.** Tie up loose ends but don't stop there. Send 'em off with something to chew on.

- **Example.** It took a while to convince Grandpa that his hearing aid hadn't been stolen by pirates. But we never did figure out what to do with all that jello.
- **Example.** As this season of *Mariner* miracles comes to a close, there's just one question on everyone's mind: Can they do it again next year?

**2. Base your endings on successful models.** Look at the kinds of endings other writers use and try their techniques in your own writing.

- **Question.** Why didn't I think it through more carefully? When will I ever learn my lesson?
- **Description.** Dead quiet. Nobody said a word. We just listened to the sound of the rain and wondered.
- **Remember.** If you're ever in that situation again, just remember: It's the green wire not the red wire.
- **Future.** We don't know when we'll run out of oil. But we know we'll run out some day—and soon.
- **Feelings.** He was laughing so hard I thought he'd fall over. And everyone else was laughing, too.
- **Advice.** Flu season is right around the corner. So get your shot before it gets you.
- **Lesson.** The guy who said "Slow and steady makes the grade" probably wasn't working on deadline.
- **Do.** Take a few minutes at the end of each day and think of all the good things in your life.

**3. Don't go back, go beyond.** Don't restate your beginning at the end, your reader already read it! Instead, take your reader just a little bit further.

**Beginning.** My father never had much money but he loved giving gifts. As a boy, I imagined him spending his last pennies on treasures just for me. As I grew up, I realized that the joy he took in gift giving had little to do with sacrifice. But my sense of him as a generous man never diminished.

**Ending.** I felt then as I do today that I missed something in my father. He was a hard man to understand. And an even harder man to love. But when I think about missing the value of a gift he gave me, I wonder what other gifts I missed. And how valuable they might be if I could find them now.



# Transition-Action-Details™

**1. Use Transition-Action-Details to pre-write any narrative.** It's perfect for memoir or other personal experience writing; great for fiction, too.

TRANSITION	ACTION	DETAILS
Last summer,	I went on vacation with my family to the ocean.	<ul style="list-style-type: none"> <li>• We go almost every year.</li> <li>• There's a lot to do.</li> <li>• My dog and I go exploring.</li> </ul>
On the third day,	I was walking with my dog, Gepetto, along a cliff overlooking the beach below.	<ul style="list-style-type: none"> <li>• About 75 feet up above the beach.</li> <li>• On a narrow path.</li> </ul>
As we got up to the highest point on the cliff,	We saw a small animal scurry under some rocks.	<ul style="list-style-type: none"> <li>• It startled me at first.</li> <li>• I just kept on walking.</li> <li>• Gepetto ran after it.</li> </ul>
TO BE CONTINUED...		

**2. Transition-Action-Details also works for other sequential forms.**

Historical events, directions, algorithms, processes, procedures, summaries, anything that goes step-by-step in a fixed order.

TRANSITION	ACTION	DETAILS
When the Turkish Ottoman Empire collapsed at the end of World War I,	Great Britain ended up administering Palestine.	League of Nations' Mandate System; League Covenant Article 22.
In 1917, at the urging of Zionist groups in England,	The British issued the Balfour Declaration.	"...the establishment of a national home for the Jewish people."
During the years of the Mandate, 1922-1947,	Many Jews immigrated to Palestine.	Mostly from Eastern Europe; many fleeing Nazi persecution in the 1930s.
TO BE CONTINUED...		

**3. Try this order: beginning, end, middle, details, transitions.** Start with the first "Action" box, then fill in the last "Action" box, and then the actions in the middle. Now, add details. Finally, fill in transitions if you need them.

# What-Why-How™

**1. Most logical arguments follow a “what-why-how” pattern.** It’s all about what you think, why you think it, and how you know you’re right.

- **“What” stands for “What do you think?”** This is your opinion, your main idea, or your thesis in a research paper.
- **“Why” stands for “Why do you think it?”** These are the reasons you think what you think.
- **“How” stands for “How do you know?”** This is the set of examples, explanations, and evidence that make up your support.

**What do you think?**  
The Nintendo Wii is the best new game console.

**Why do you think it?**  
It’s more popular than Xbox 360 or PS3.

**How do you know?**  
It’s sold more units than Xbox and PS3 combined.

**2. Use the What-Why-How strategy for expository and persuasive writing.** Essays, essay questions, editorials, research papers, recommendations, anything that requires you to sustain a logical argument.

WHAT DO YOU THINK?	WHY DO YOU THINK IT?	HOW DO YOU KNOW?
Driving is becoming a less desirable means of getting around.  <i>This is the main idea or thesis. Stating it as a single complete sentence will help your piece stay clear and focused.</i>	It’s expensive.	<ul style="list-style-type: none"><li>• High gas prices.</li><li>• Insurance and repairs.</li><li>• New cars cost big \$\$\$.</li></ul>
	It’s dangerous.	<ul style="list-style-type: none"><li>• More cars on the road.</li><li>• Drivers on cell phones.</li><li>• Accidents I’ve had.</li></ul>
	It’s bad for the environment.	<ul style="list-style-type: none"><li>• Pollutes the air.</li><li>• Uses natural resources.</li><li>• More roads to build.</li></ul>

**3. Focus on the “How” column and the “Three Es of Strong Support.”** Use a combination of examples, explanations, and evidence.

- **Examples.** A story, an experience from your life or someone else’s.
- **Explanations.** Adding detail to a reason. A “why for a why.”
- **Evidence.** Facts and figures, statistical data, quotes, artifacts, etc.

# Content-Purpose-Audience™

**1. The Content-Purpose-Audience strategy addresses the most important parts of a piece of writing.** Working these out gives you a solid plan.

CONTENT <i>Main Idea + Key Details</i>	PURPOSE <i>Think + Do</i>	AUDIENCE <i>People + Questions</i>
<ul style="list-style-type: none"><li>• <b>Main Idea.</b> The one most important thing you want your readers to know.</li><li>• <b>Key Details.</b> The details that help your readers unlock your main idea</li></ul>	<ul style="list-style-type: none"><li>• <b>Think.</b> What do you want your readers to think when they're done?</li><li>• <b>Do.</b> What do you want your readers to do when they're done?</li></ul>	<ul style="list-style-type: none"><li>• <b>People.</b> The specific group of readers you are writing for.</li><li>• <b>Questions.</b> The things your readers will ask that you have to answer.</li></ul>

**2. Use the Content-Purpose-Audience strategy for expository, persuasive, informational, and research writing.** These kinds of writing require a clearly stated main idea, strong support, a clear sense of purpose, and the ability to anticipate and address your readers' questions.

CONTENT	PURPOSE	AUDIENCE
<b>Main Idea</b> The city should put stop signs at the intersection of Oak St. and Busy Ave.	<b>Think</b> Adding a stop sign will save lives and reduce costs in the long run.	<b>People</b> <ul style="list-style-type: none"><li>• Town Council</li><li>• Local residents</li></ul>
<b>Key Details</b> <ul style="list-style-type: none"><li>• Increased traffic</li><li>• Neighborhood kids play</li><li>• Two recent accidents</li></ul>	<b>Do</b> Authorize the money for a new stop sign in the next town budget.	<b>Questions</b> How much will it cost? Will it disrupt traffic? Will businesses suffer?

**3. Try this order: People, Questions, Main Idea, Key Details, Think, Do.** Starting with the audience first will help you do the best job possible of addressing their needs. Moving to content next will help you clarify your position and assess your support. Purpose comes in at the end. If there's a message you want your readers to remember, or some action you want them to take, this is the place to say it.

# Main Idea

**1. The main idea is the one most important thing you want your reader to know.** If you could boil a piece down to a single sentence that represented what it was all about, that would be your main idea. You know you've found one when you've found something that is:

- **A complete sentence.** It's not just the topic, it's what you want your readers to know about it.
- **A message, a moral, a lesson.** It's what you most want your reader to understand and benefit from.
- **Important to the writer.** This is the point of the whole piece; you have to really care about it.
- **Important to the reader.** Make a good guess about what your reader really cares about.

**2. The main idea may be stated or implied.** In expository and persuasive writing, you'll probably state your main idea literally, often at the beginning. But in narrative writing, and especially in fiction, the story will serve as an example of your main idea, and you'll let the reader figure it out.

## Stated Main Idea

A dog is the perfect pet to take on a trip. Last summer, I took my dog, Gepetto, to the beach. We played together everywhere. We explored the rocky shore and chased the seagulls. We even climbed up huge cliffs. I couldn't imagine doing any of these things with a cat or a bird or a goldfish. Could you?

Main Idea: "A dog is the perfect pet to take on a trip." (Written in the piece.)

## Implied Main Idea

A rabbit and a turtle have a race. The rabbit races ahead and takes a nap. The turtle plugs along and catches up. The rabbit races off but gets tired and stops to rest again. The turtle just keeps going, laying one huge turtle foot in front of the other, eventually lumbering his way to victory while the rabbit naps near the finish line.

Main Idea: "Slow and steady wins the race." (Not written in the piece.)

**3. Main idea is a powerful tool for revision.** Draft a bit, then ask yourself, "What's the one most important thing I want my reader to know?" Write your main idea in a single sentence at the top of the page. Now, reread your draft. If you find things that don't go with your main idea, consider deleting them.

# Sentence Structuring

**1. Sentences are made of parts.** There are four types of sentence parts: lead-in parts, main parts, in-between parts, and add-on parts.

On a bitter cold winter morning, Malcolm Maxwell, a young man of simple means but good intentions, left the quiet country town in which he'd been raised, and set off on the bold errand he'd been preparing for all his life.

- **Main Parts.** These parts usually contain the main action of the sentence: "Malcolm Maxwell, ... left the quiet country town in which he'd been raised, ..."
- **In-Between Parts.** These parts go in between other parts. They feel like a slight interruption: "...a young man of simple means but good intentions, ..."
- **Intro Parts.** These parts introduce other parts, especially main parts: "On a bitter cold winter morning, ..."
- **Add-On Parts.** These parts provided added information: "...and set off on the bold errand he'd been preparing for all his life."

**2. Parts go together to make patterns.** Use the patterns by replacing the model content with your own writing. Here are a few to start with:

- **Intro + Main.** As class began, Mr. Funston dreamed of Christmas vacation.
- **Main + Add-On.** He stared at the blank faces of his students, perplexed that he had nothing whatsoever to teach them today.
- **Main + In-Between + Main.** The Lesser Antilles, he realized, would be the perfect place for a warm winter hiatus.
- **Main + Add-On + Add-On.** He saw himself on the beach, baking in the mid-day sun, enjoying tasty snacks and refreshing beverages.
- **Intro + In-Between + Main.** Ten minutes later, having dismissed his students early to lunch, he sat at his computer hunting and pecking his way to a good deal on a two-week trip to the West Indies.
- **Main + In-Between + Add-On.** Mr. Funston leaned back in his big teacher chair, forgetting about the twelve pounds he'd put on at Thanksgiving, and immediately tumbled backward into the Halloween bulletin board he'd neglected to take down.

# Conventions Reading™

**1. Conventions reading.** Saying the punctuation along with the words is no way to read. But it's a fun and easy first step in learning to punctuate.

On a dark December night in 1776, as he led a barefoot brigade of ragged revolutionaries across the icy Delaware River, George Washington said, "Shift your fat behind, Harry. But slowly or you'll swamp the darn boat."

[NEW PARAGRAPH] [INDENT] [CAPITAL] on a dark [CAPITAL] december night in 1776 [COMMA] as he led a barefoot brigade of ragged rev [HYPHEN] olutionaries across the icy [CAPITAL] delaware [CAPITAL] river [COMMA] [CAPITAL] george [CAPITAL] washington said [COMMA] [QUOTE] [CAPITAL] shift your fat behind [COMMA] [CAPITAL] har ry [PERIOD] [CAPITAL] but slowly or you [APOSTROPHE] ll swamp the darn boat [PERIOD] [QUOTE] [END OF PARAGRAPH]

**2. Conventions inquiry.** What do you know? What do you want to know?

EXAMPLE	RULE	QUESTIONS/COMMENTS
December	Name of a month	What about days? And written out numbers?
George Washington	Name of a person	Any person? Or just famous people?
General	A title	Sometimes titles are not capitalized. Why?
"Ox"	A nickname	It's still a name even if it's not his real name.

**3. Conventions rules.** With a little practice, you can create your own writing rule book. Most rules sound like this: "Use a [name of mark] to/when/for [description of writing situation]." For example, "Use commas to separate items in a list." or "Use a capital letter for names, places, the word "I", things that are one-of-a-kind, and the beginning of a sentence."

**4. Edit Passes.** When you edit your writing, focus on one problem at a time in this order: words (left out, repeated, wrong, etc.), sentences, commas, capitalization, paragraphs, spelling, dialog, and "the little stuff."

## Notes

# Reading Pattern Reference



Teaching That Makes Sense  
[www.ttms.org](http://www.ttms.org)



# Phrase Breaking™

**1. Phrasing is a natural activity all readers understand.** Most readers don't think about phrasing. But they know it by heart:

I pledge allegiance to the flag of  
the United States of America and  
to the Republic for which it  
stands, one Nation under God, in-  
divisible, with liberty and justice  
for all.

I pledge allegiance  
to the flag  
of the United States of America  
and to the Republic  
for which it stands,  
etc...

**2. Phrasing breaks language into meaningful parts.** In the phrased version of *The Pledge of Allegiance*, each line makes sense by itself. Language works in phrases. And reading works best when we can see them easily.

**3. Phrases follow predictable patterns.** In general, phrases:

- Start with little words and end with big ones.
- Are 3-6 words long, occasionally one or two, very rarely 7 or more.
- Follow the grammar of the sentence and are read as a unit.
- Are separated from each other by a tiny "space", but not a pause.

**4. Phrasing makes hard texts easier.** Phrasing is helpful all the time. But it's especially important to concentrate on when:

- **You're having trouble decoding.** Stumbling on words makes ideas hard to understand.
- **You're faced with long sentences.** Big ideas are easier to understand in small parts.
- **You need more comprehension.** Careful phrasing is a great way to pick up small details.
- **You're having trouble with new vocabulary.** Phrasing helps you discover what a word means in relation to others. It also gives you clues as to how a word functions as a part of speech.
- **You're reading above your level.** When you're struggling, phrasing helps you read more accurately and more fluently.

# Expressive Reading

**1. Make your voice match the meaning.** Instead of reading like a robot, change your voice to match the meaning of what you read:

- **Change pitch.** Making your voice go up and down as you follow a sentence or switch characters helps you understand where ideas begin and end.
- **Change volume.** Saying some words louder and longer than others creates emphasis and helps you know what's important.
- **Change rhythm.** Stopping and starting, speeding up and slowing down help readers see how small parts of sentences combine to create complete thoughts.
- **Change tone.** Sometimes, readers use a soft, warm voice; sometimes their voice is cold and hard. Tone communicates feeling.

**2. Expressive readers use techniques that match the way we speak.**

The following strategies will make your reading sound more like talking:

- **Go slow.** To increase expression, decrease speed; extra expression takes extra time.
- **Repeat till it's complete.** If you mess up, repeat the sentence from the beginning.
- **Sentence high and low.** Start high, then lower the pitch slightly as you near the end.
- **Sentence fast and slow.** Start quick, then slow down slightly as you near the end.
- **Up at the end for a question.** The pitch of your voice springs up at the finish.
- **Straight up for an exclamation.** Increase both pitch and volume for an exclamation.
- **Stop at a period, pause at a comma.** Pause at colons, semicolons, and dashes, too.
- **Character high, narrator low.** Higher pitch for spoken words; lower for attributions.
- **Emphasize important words.** Call attention to a word or phrase with pitch, volume, tone, or timbre.
- **Once more with feeling.** Match your emotions to the meaning of the words.

**3. Expression works even when you read silently.** Listen to the voice inside your head as you read. You can still hear changes in expression. Pay attention to the “sound” of silent reading. It will help you improve.

# Monitor and Repair

**1. Track your understanding as you read.** Here are four situations to watch for that might mean you're missing something:

- **A feeling something doesn't make sense.** The most common clue is that what you're reading now doesn't make sense with what you've read before.
- **An unknown character.** Sometimes a character will seem to appear out of nowhere. Chances are you missed the introduction at an early point in the story.
- **A surprising change of place.** Sometimes you think you're still in one setting when the story has moved on to someplace else.
- **An idea out of the blue.** In non-fiction texts, most new ideas are logically connected to previous ideas. If something seems disconnected, you may have missed it when it was discussed before.

**2. Fix comprehension breakdowns with the big four fix-up strategies.**

Here are the four most common ways readers repair their understanding:

- **Reread.** Back up a bit and read it over again.
- **Rethink.** Stop reading. Think about what and what you're missing. Ask yourself a question or two. What is it, specifically, that you don't understand?
- **Review.** Flip back a bit. Skim headings or the first and last lines of paragraphs.
- **Retell.** If you've got someone to talk to, tell them a bit about what you've just read. If you're alone, tell yourself.

**3. Rereading is the most effective fix-up strategy.** Reading something a second time (or even a third or a fourth!) is the easiest and best way to improve your understanding. Here are four ways to go about it:

- **Reread the current sentence.** Go back to the capital letter and read through to the period. Don't stop till you get there.
- **Reread the current paragraph.** Go back to the first sentence and read through to the last.
- **Break it down.** Split paragraphs into sentences and sentences into phrases.
- **Focus on the tough spot.** Isolate the difficult sentence or phrase. Don't spend too much time on any a single word.

# Question

**1. The best way to find answers is to ask questions.** To figure out something about a text, pose a question and go looking for the answer.

On a dark January night, a stout man with a black bag limps down a narrow path into a wrap of fog. Unusual as it is, this nocturnal stroll is anything but unusual for Mr. Bostwick; his work brings him to many locations around this tiny town, and almost always at odd hours. Night is normal for Mr. B; in fact, many in his occupation find daylight distracting—too much human contact.

- **Question:** What is Mr. Bostwick on his way to do?
- **Question:** Why does he mostly work at night?
- **Question:** What's in the bag? Is he a doctor?
- **Question:** Is he doing something that might get him in trouble?

Asking questions helps you find answers as you move further into the text. The trick is to focus on the best questions so you can find the best answers.

**2. Fat questions are usually more interesting than skinny ones.** Asking questions from different angles inspires interesting insights.

When the “Big Three” met at Yalta to carve up Europe in the aftermath of World War II, the deck was stacked in Russia’s favor. Roosevelt was weak and tired, his health was failing. He would die in two months. Churchill was stubborn and defiant but eventually gave in. In contrast, Stalin was strong and energetic. He knew he could drive a hard bargain and win.

- **Skinny Questions:** Who won World War II? What did the leaders talk about? When did Roosevelt die? Where is Yalta?
- **Fat Questions:** How did the physical and emotional health of the three leaders affect the outcome of the negotiations?

Skinny questions often begin with “who”, “what”, “when”, or “where.” Fat questions often begin with “how” and “why.”

**3. Ask questions that drill down into what matters most.** Instead of asking questions randomly, focus on something important (often with a fat question). Then follow up on that one thing (often with skinny questions).

# Infer

**1. An inference is an educated guess.** Certain words, phrases, and ideas help us discover additional information and gain valuable insight.

Damon enjoyed the long weekend over Labor Day. But when the alarm clock rang on Tuesday morning, he pretended he didn't hear it. When that didn't work, he threw it across the room and pulled the covers up over his head.

- **Inference:** It's the first day of school; Damon doesn't want to go.
- **Inference:** Damon is very angry about the summer being over.

An inference is an educated guess, but it's just a guess. Most inferences have to be confirmed with other clues we encounter in other places.

**2. Successful inferences tell us more than what is written.** There's often more to a piece than just the words. Our job is to infer what that is.

As he drifted into an uneasy sleep, he flashed on his father sitting alone in a room. Where was he now? Why couldn't Damon be there, too?

- **Inference:** Damon is angry but it's not about having to start school.
- **Inference:** Damon misses his father.

**3. Writers sometimes show us one thing to tell us another thing.**

What writers show us is an example of what they want us to know.

SHOW	TELL
...long weekend over Labor Day.	It's the first day of school.
...he threw it across the room...	Damon is angry.
Where was he now?	Damon misses his dad.
Why couldn't Damon be there, too?	Damon wants to go and live with him.

**4. Inferences work best when we tie them to the text.** When you make an inference, keep track of the words and ideas that inspired it.

# Clarify

**1. Start with what's clear, then work on what isn't.** The parts that are clear form the foundation we build on to tackle the parts we're unsure of.

The yellow fog that rubs its back upon the window-panes,  
The yellow smoke that rubs its muzzle on the window-panes  
Licked its tongue into the corners of the evening,  
Lingered upon the pools that stand in drains,

- **What's clear?** This is a description of a foggy night in a city.
- **What isn't?** Strange phrases that don't sound like a weather report.

**2. Identify what's not clear and try to make sense of it.** What, specifically, is not clear? How can we explain it so it makes sense?

DIG IT OUT	CLEAR IT UP
...rubs its back..., rubs its muzzle..., licked its tongue...	This what an animal might do. The fog is like an animal.
...corners of the evening...	Cities have corners, evenings don't.
...the pools that stand in drains,	It's damp; it's been raining.

The best ways to clear something up are: (1) Ask a question; (2) Make an inference; (3) Discover the meaning of an important word; (4) Use context.

**3. Read ahead to confirm and draw your conclusion.** The parts that are clear form the foundation we build on to tackle the parts we're unsure of.

Let fall upon its back the soot that falls from chimneys,  
Slipped by the terrace, made a sudden leap,  
And seeing that it was a soft October night,  
Curled once about the house, and fell asleep.

- **Confirm.** "Curled... and fell asleep." It's definitely an animal.
- **Conclude.** It's a metaphor. The fog is a cat!

If you can't confirm or conclude, go back and clarify again. Or move on to the next part and use new information to improve your understanding.

# Theme and Main Idea

**1. A theme is a general idea a writer explores in depth.** Themes are usually stated as single words or phrases: Love; The Pain of Growing Up; Perseverance; Global Warming; The Puzzling Popularity of Paris Hilton; Etc.

**2. The main idea is the one most important thing the writer wants you to know.** If you could boil a text down to a single sentence that represented what it was all about, that would be the main idea. You know you've found one when you've found something that is:

- **A complete sentence.** It's not just the topic, it's what the author wants you to know about it.
- **A message, a moral, a lesson.** It's what the author most wants you to understand and benefit from.
- **Important to the writer.** What one thing does the writer seem to care about most?
- **Important to the reader.** What do you care about most in this particular text?

**3. Theme and main idea are different but closely related.** A theme is something important about which a writer has something to say; a main idea is the one most important thing the writer has to say about it.

THEME	MAIN IDEA
Love	Love conquers all.
The Pain of Growing Up	We find our own way in own time.
Perseverance	Slow and steady makes the grade.
The Puzzling Popularity of Paris Hilton	We'll always have Paris.

**4. Specific techniques help you find themes and main ideas.** Here are two approaches that work most of the time for most readers:

- **Main Idea.** Ask "What's the one most important thing the writer wants me to know?" Answer in the form of a complete sentence. Don't include "The main idea is...."
- **Theme.** Look for examples of the same thing coming up again and again. These are "motifs." What do they have in common? What general idea do they all refer to?



# Statement and Support

## 1. The Idea-Details strategy is an easy way to organize statements and support. Any text can be organized with Idea-Details:

Learning is more than taking tests and moving to the next grade. For most of us, the challenges of life provide far more instruction than sitting in a classroom. As Mark Twain said, "Never let school interfere with your education."

IDEA	DETAILS
Learning is more than taking tests and moving to the next grade.	<ul style="list-style-type: none"><li>• For most of us, the challenges of life provide far more instruction than sitting in a classroom.</li><li>• As Mark Twain said, "Never let school interfere with your education."</li></ul>

## 2. For logical arguments, use the What-Why-How strategy. Most arguments can be understood by asking three questions: What does the author think? Why does the author think it? How does the author know?

Driving is becoming more dangerous. I've almost been hit twice recently by people paying attention to electronic gadgets instead of the road. In a USA Today survey, 72% of drivers said they take cell phone calls while driving.

WHAT DO YOU THINK?	WHY DO YOU THINK IT?	HOW DO YOU KNOW?
Driving is becoming more dangerous.	I've almost been hit twice by people paying attention to electronic gadgets instead of the road.	In a recent USA Today survey, 72% of drivers said they take cell phone calls while driving.

## 3. The best arguments use examples, explanations, and evidence for support. Each type of support appeals to a part of our personality:

- **Examples:** Images and stories stir our emotions and draw us in.
- **Explanations:** These satisfy our curiosity and need for logic.
- **Evidence:** Facts and figures appeal to our sense of certainty and our desire to have new ideas validated by respected independent authorities.



# Summary and Explanation

**1. What's a summary?** A summary is a recounting of the important elements in a text, in the order they occur, so people will know what you're referring to. The Transition-Action-Details strategy is a good tool to use.

TRANSITION	ACTION	DETAILS
When his parents are killed by the evil Lord Voldemort...	Harry is left with his Aunt and Uncle, the Dursleys, on Privet Drive.	They're mean to him; he hates living there; he's often lonely and afraid.
After years of misery and suffering at the hands of his selfish relatives...	He receives an invitation to attend an unusual school called Hogwarts.	He learns he's a wizard and that Lord Voldemort is plotting to kill him.

TO BE CONTINUED...

Keep these three things in mind when you summarize:

- **Use the best stuff.** Tell only the important things in the order they occur.
- **Stick to the source.** Use only ideas from the text you're summarizing.
- **Keep it short.** The summary should be much shorter than the original.

**2. What's an explanation?** An explanation is a discussion of important elements in a text, so other people will understand your thinking. The What-Why-How strategy is a great tool for developing an explanation.

WHAT DO YOU THINK?	WHY DO YOU THINK IT?	HOW DO YOU KNOW?
In the end, Harry eludes Voldemort, but that's not his ultimate goal.	What Harry wants most is to be part of a family who loves him.	When he visits the Mirror of Esired, he sees his parents in the reflection.

Keep these three things in mind when you explain:

- **Tell it all.** Include everything an audience needs to understand your ideas.
- **Go beyond the source.** Use your own good ideas to make things clear.
- **As long as necessary.** Length depends on what others need to know.

**3. Summary and explanation work together.** For example, we rarely summarize something unless we need to refer to it as part of an explanation.

# The Five Big Questions

**1. What makes this text good?** Think about the language you use to talk about quality in writing.

- **Ideas.** Main idea, details, “showing”, purpose, originality, etc.
- **Organization.** Leads, endings, sequencing, pacing, transitions, etc.
- **Voice.** Personality, honesty, individuality, emotions, tone, etc.
- **Word Choice.** Strong verbs, usage, memorable phrases, etc.
- **Sentence Fluency.** Structure, rhythm, expressiveness, etc.
- **Conventions.** Punctuation, spelling, grammar, etc.
- **Presentation.** Formatting, layout, graphics, design, etc.
- **Story Elements.** Character, plot, setting, conflict, etc.

**2. What would make this text better?** Use the same categories from Big Question #1. Be thoughtful, be critical, be fair. But don’t rewrite the text.

**3. What’s the one most important thing the writer wants you to know?** This is the main idea. Your response should be something that is:

- **A complete sentence.** It’s not the topic, it’s what the writer wants you to know about it.
- **Important to the writer.** What one thing does the writer seem to care about most?
- **A message, a lesson, a moral.** It’s what the writer most wants you to understand and benefit from.
- **Important to the reader.** What do you care about most in this particular text?

**4. Why did the writer write this?** This is the writer’s purpose. To figure it out, remember “think and/or do.”

- **Think.** What does the writer want you to think?
- **Do.** What does the writer want you to do?

**5. What does the audience need to know to understand and appreciate this text?** Sometimes you can give people important background information that helps them understand the text and your assessment of it.

# The Five Facts of Fiction

**1. Fiction is all about characters.** Characters can be explored many ways but the “character trait” approach is probably the most common:

- **Physical Traits.** Anything relating to physical description.
- **Emotional Traits.** Overall mood, reactions to events, etc.
- **Social Traits.** Interactions with others, relationships, etc.
- **Intellectual Traits.** Thinking style, problem-solving ability, etc.

**2. Fiction is all about what characters want.** Sometimes characters want things, sometimes they want feelings, and sometimes they want both:

- **Things.** Possessions, money, a job, to be in a different place, etc.
- **Feelings.** Love, freedom, safety, any strong and positive emotion.

**3. Fiction is all about how characters get or don’t get what they want.** The plot of a story unfolds as characters try to get what they want.

- **Does the character get it?** Yes, no, sort of? Explain.
- **How does it happen?** What is the sequence of events?.

**4. Fiction is all about how characters change.** Some change a lot, some change a little, some don’t seem to change at all.

- **Beginning.** Character’s state of mind at the start of the story.
- **Change.** How does the change happen?
- **Ending.** Character’s state of mind at the end of the story.
- **Lesson.** What lesson do we learn from the character’s experience?

**5. Fiction is all about a world an author creates.** What’s in this world? What kind of world is it?

- **People.** Other characters and their relationships.
- **Things.** Important objects, activities, occurrences, etc.
- **Places.** The many different settings in the story.
- **Ideas.** Themes a writers wants to explore.

# The Five Text Connections

**1. Readers connect with texts in many ways.** Connections make reading fun and help you understand things. Here are five kinds of connections:

- **Text-to-Self.** When something you read reminds you of yourself.
- **Text-to-World.** When something you read reminds you of the world or life in general.
- **Text-to-Text.** When something you read reminds you of something else you've read.
- **Text-to-Media.** When something you read reminds you of a movie, TV show, song, play, painting, sculpture, dance, video game, or other creative representation.
- **Text-to-My-Text.** When something you read reminds you of something you've written.

**2. Different connections help you learn different things.** All connections are helpful but each type has something specific to offer.

- **Text-to-Self.** Tells us about what we like and don't like.
- **Text-to-World.** Helps us understand themes and main idea.
- **Text-to-Text and Text-to-Media.** Helps us assess quality.
- **Text-to-My-Text.** Teaches us about writing.

**3. Text-to-text connections are the hardest and most valuable.** It's hard to remember things from one text to the next, but connecting something in one with something in another can strengthen your understanding and improve your memory of both.

**4. Connections are enhanced by questions.** When you make a strong connection with a text, take a moment to explore it with these questions:

- **Text-to-Self.** How does the text remind you of you? How do you feel about that?
- **Text-to-World.** Is this about your life or life in general? Is there a lesson to be learned here?
- **Text-to-Text and Text-to-Media.** How do the presentations compare? Which do you like more?
- **Text-to-My-Text.** What do you appreciate about the text? Is there a technique you can use?

## Notes

# Content Area Pattern Reference



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# Topic Equations™

**1. Identify different areas of interest.** Use the Like-Fun-Care About-Interested In chart to make lists.

<b>THINGS YOU LIKE</b> <ul style="list-style-type: none"> <li>• Money</li> <li>• Clothes</li> <li>• Pizza</li> <li>• Music</li> <li>• Movies</li> <li>• Video Games</li> </ul>	<b>THINGS YOU DO FOR FUN</b> <ul style="list-style-type: none"> <li>• Baseball</li> <li>• The Mall</li> <li>• Internet</li> <li>• Shopping</li> <li>• Party</li> <li>• Watch TV</li> </ul>
<b>THINGS YOU CARE ABOUT</b> <ul style="list-style-type: none"> <li>• Family</li> <li>• Friends</li> <li>• My Dog</li> <li>• My Community</li> <li>• People being treated fairly</li> </ul>	<b>THINGS YOU'RE INTERESTED IN</b> <ul style="list-style-type: none"> <li>• Computers</li> <li>• Cars</li> <li>• Math</li> <li>• College</li> <li>• Getting a part-time job</li> </ul>

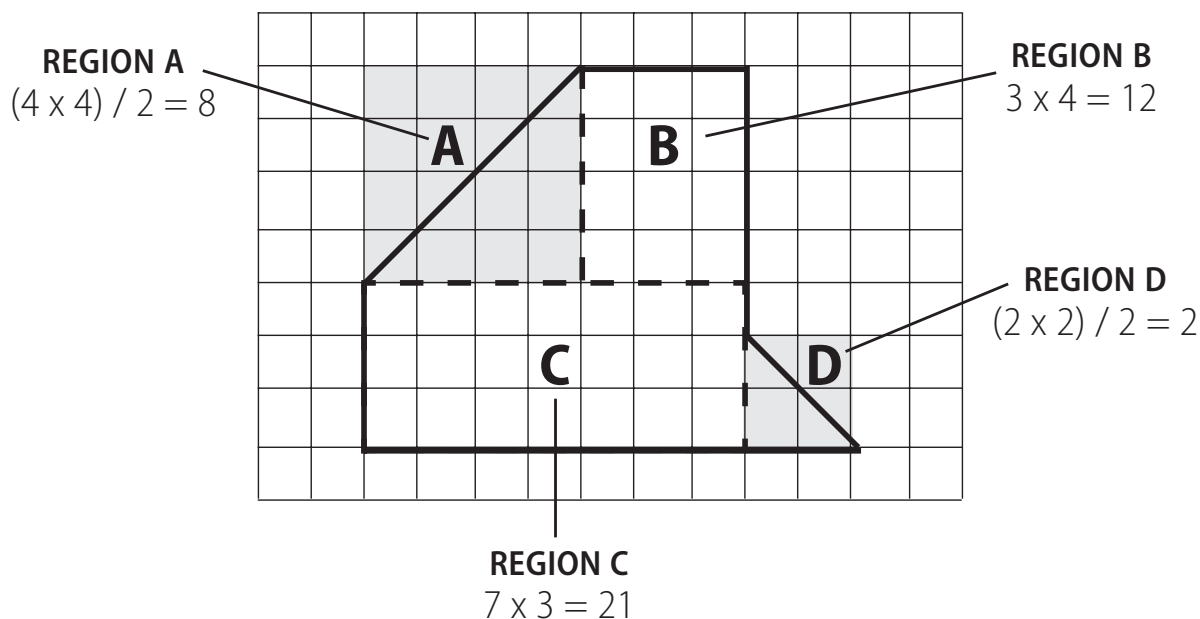
**2. Interest + Subject = Topic.** Use the Topic Equations chart to connect your interests to the subject you are studying.

	SUBJECT	TOPIC
Baseball	Civil War	Sports during the period; baseball as a popular pas-time during the war.
Money	Civil War	Standard of living; purchasing power of families; types of money; taxes.
Part-Time Job	Civil War	Employment rates; job opportunities for young people; wages; careers.
College	Civil War	College opportunities; admissions process; costs; fields of study; trades.
Music	Civil War	Popular music of the period; famous performers; music as a business.

# Draw-Label-Caption™

**1. Use the Draw-Label-Caption strategy to convey information.** The strategy will work well any time diagramming is required.

## FINDING THE AREA OF AN IRREGULAR POLYGON



The total area is 43. To find the area, I created four rectangular regions and added their areas. In Regions B and C, I multiplied length and width. In Regions A and D, I also multiplied length and width, but I divided by 2 because the triangles I was measuring have exactly half the area of rectangles.

**2. Use the Draw-Label-Caption strategy for note taking.** In less formal situations, the strategy can be used to quickly capture information in a visual format.

**3. Use the Draw-Label-Caption strategy to capture sequences that illustrate a progression or process.** Draw-Label-Caption is ideal for diagramming ideas that unfold over time including things like steps in a geometry proof, stages in a scientific process, or sketches that reflect the narrative progression of historical events.



# Idea-Details™

**1. Use the Idea-Details strategy for note taking.** Most textbooks are organized into short sections of ideas and supporting details:

Plants, algae, and even some bacteria use a process called photosynthesis to convert sunlight into energy. Photosynthesis occurs in two stages. In the first stage, light-dependent reactions capture the energy of light and use it to make high-energy carrier molecules called ATP that are used in the second stage. During the second stage, the light-independent reactions, sometimes called dark reactions, use the high-energy ATP molecules to capture carbon dioxide and create the beginnings of carbohydrates.

IDEA	DETAILS
Two stages of photosynthesis.	<ol style="list-style-type: none"><li>1. Light-dependent reactions use light to make molecules of ATP for the second stage.</li><li>2. Light-independent or dark reactions use ATP molecules to capture carbon dioxide and begin to produce carbohydrates.</li></ol>

**2. Use the Idea-Details strategy for constructed responses.** Here, the writer is answering the question, “Who won *The Battle of Antietam*?”

IDEA	DETAILS
The Union won the Battle of Antietam even though both armies lost the nearly same number of men.	<p>Kept Lee from invading the North.</p> <p>Kept Britain and France from supporting the South.</p> <p>Gave Lincoln a chance to introduce the Emancipation Proclamation.</p>

Even though both armies lost nearly the same number of men, the Union gained the most from the battle because it kept Lee from invading the North and kept Britain and France from supporting the South. It also gave Lincoln the chance to introduce the Emancipation Proclamation.

# Tell-Show™

**1. Use the Tell-Show strategy to make inferences.** In this example, from President Truman's radio speech after the bombing of Hiroshima, what would you say about Truman's knowledge and intentions?

The world will note that the first atomic bomb was dropped on Hiroshima, a military base. That was because we wished in this first attack to avoid, insofar as possible, the killing of civilians. But that attack is only a warning of things to come. If Japan does not surrender, bombs will have to be dropped on her war industries and, unfortunately, thousands of civilian lives will be lost. I urge Japanese civilians to leave industrial cities immediately, and save themselves from destruction.

TELL	SHOW
...the first atomic bomb was dropped on Hiroshima, a military base.	Either Truman didn't know it was a city or he didn't want Americans to know we'd bombed civilians.
I urge Japanese civilians to leave industrial cities immediately,...	Either Truman plans to drop more bombs or he just wants to scare the Japanese into surrendering.

**2. Use the Tell-Show strategy to improve the quality of description.**

Here, we add visual detail to a generic description of a science experiment.

TELL	SHOW
Mystery Powder #4 caused a reaction when we put it in the solution.	At first, nothing happened when we put the powder in. But after about 15 seconds, it started to bubble a little. As it bubbled up, the solution began to slowly turn green. After about a minute, the bubbles stopped and eventually the green color faded until the solution was almost totally clear again.

# Action-Feelings-Setting™

**1. Use Action-Feelings-Setting to interpret important historical events.** The following paragraph describes negotiations at the end of World War II by representatives of the three victorious superpowers of the age.

When the “Big Three” met at Yalta to carve up Europe in the aftermath of World War II, the deck was stacked in Russia’s favor. Roosevelt was tired from the long journey and his health was failing; he would die just two months later. Churchill argued defiantly for free elections and the spread of democracy in Eastern Europe but eventually gave in to Stalin’s demands for Russian control. In contrast, Stalin was strong and energetic. With by far the largest army in Europe, he knew he could drive a hard bargain.

- **Action:** Roosevelt, Churchill, and Stalin negotiate control of Europe at the end of World War II.
- **Feelings:** Roosevelt was ill; exhausted from the long trip and in failing health. Churchill was frustrated with Stalin’s unwillingness to make concessions. Stalin was confident he could get whatever he wanted.
- **Setting:** Yalta was a resort city on the Crimean peninsula of the Black Sea in Russia. The Yalta Conference was the second of three post-WWII conferences attended by leaders from the United States, England, and Russia .

**2. Use Action-Feelings-Setting as a pre-write to capture important moments in history.** Here’s a brief description of the famous incident that touched off the Montgomery Bus Boycott and set the stage for the formal beginnings of the Civil Rights Movement.

- **Action:** Rosa Parks refused to give up her seat on the bus.
- **Feelings:** Parks was defiant; she was tired of giving in to rules she knew were unfair. The bus driver was surprised and angry.
- **Setting:** 6PM, Thursday, December 1, 1955, Montgomery, AL.

In Montgomery, AL, on the evening of December 1, 1955, Rosa Parks stood up for what she believed in by sitting down. A surprised and angry bus driver threatened to call the police if she didn’t give up her seat to a white person, but Ms. Parks defied the law and the custom of the time by refusing to move.

# Transition-Action-Details™

**1. Use Transition-Action-Details to describe a process.** This example describes how light impulses are transmitted from the eye to the brain.

TRANSITION	ACTION	DETAILS
When light enters the eye,	It hits the cornea first.	It passes the cornea, the aqueous humor, the lens, and the vitreous humor.
Eventually,	The light reaches the retina, the light-sensing part of the eye.	The retina has rods for vision in low light and cones for color and detail.
When light contacts these two types of cells,	A series of complex chemical reactions occurs.	A chemical called Rhodopsin creates electrical impulses in the optic nerve.
In an extremely fast reaction, beginning in a few trillionths of a second,	Rhodopsin breaks down and eventually forms Metarhodopsin.	This sends electrical impulses to the brain which are interpreted as light.

**2. Use Transition-Action-Details to summarize historical events.** Here's a brief summary of how Israel become a country.

TRANSITION	ACTION	DETAILS
When the Ottoman Empire collapsed at the end of World War I,	Great Britain ended up administering Palestine.	League of Nations' Mandate System. League Covenant Article 22.
In 1917, at the urging of Zionist groups in England,	The British issued the Balfour Declaration.	"The establishment in Palestine of a national home for the Jewish people."
During the years of the Mandate, 1922-1947,	Many Jews immigrated to Palestine.	Most were from Eastern Europe. Many fleeing Nazi persecution in the 1930s.
In 1947,	The UN proposed splitting Palestine into two states.	One for Jews, the other for Arabs. UN Resolution 181.

# What-Why-How™

**1. Use the What-Why-How strategy to organize information.** This example describes the positive and negative aspects of the Greenhouse Effect.

With all the talk about Global Warming, most people think the Greenhouse Effect is something bad that has to be stopped. But it actually has a positive side. Without it, the Earth wouldn't be warm enough for us to live. Because some of the sun's energy is trapped in the atmosphere, the average temperature is a comfortable 60 degrees. Without the Greenhouse Effect, the average temperature would drop to a chilly three degrees below zero. The problem is that human activity puts additional carbon dioxide and other so-called "Greenhouse Gases" into the air. These gases trap additional energy and the temperature goes up. In the 20th century, the Earth's temperature rose more than one degree. That doesn't sound like much, but it's enough to cause extreme weather, rising sea levels, and the melting of the polar ice cap.

WHAT DO YOU THINK?	WHY DO YOU THINK IT?	HOW DO YOU KNOW?
The Greenhouse Effect is both positive and negative.	It keeps the Earth warm.	Avg temperature is 60 degrees. Without the Greenhouse Effect it would be -3.
	Extra carbon dioxide and other gases cause temperatures to rise too high.	One degree in 20th century: bad weather, high sea levels, melting polar ice.

**2. Use the What-Why-How strategy to develop a thesis.** Here, a writer offers a counter-argument to the idea that Global Warming is a serious threat to our existence.

WHAT DO YOU THINK?	WHY DO YOU THINK IT?	HOW DO YOU KNOW?
Global Warming may not be the serious problem many people think it is.	Temperatures haven't risen any more than they normally might.	The increase in temperature could simply be the result of natural variations.
	Human beings don't have that much influence on the Greenhouse Effect.	Less than 10% of Greenhouse Gas emissions come from humans.

# Content-Purpose-Audience™

## 1. Use Content-Purpose-Audience to organize informational writing.

Here's a pre-write for a report on George Washington.

C O N T E N T	<b>MAIN IDEA</b>  George Washington was a reluctant hero. He would rather have been a farmer and a family man than a great general or the President.	<b>KEY DETAILS</b>  <ul style="list-style-type: none"> <li>• He lost most of the battles he fought.</li> <li>• He didn't want to be President.</li> <li>• His favorite thing to do was to work on his farm.</li> <li>• He missed his family and didn't like being away from them.</li> </ul>
	<b>THINK</b>  The great heroes of American history are often a lot more like regular people than how they are portrayed in school and in the movies.	<b>DO</b>  Think carefully about the way books and movies describe American heroes. Study the whole person, not just their reputation.
	<b>PEOPLE</b>  Kids in middle and high school who are studying American history.	<b>QUESTIONS</b>  <ul style="list-style-type: none"> <li>• Why didn't he want to be President?</li> <li>• What did he say about his family life and working on his plantation?</li> <li>• What did Washington want most?</li> <li>• Why don't we usually learn about the personal side of George Washington?</li> </ul>

# Question-Infer-Clarify™

**1. Use Question-Infer-Clarify to improve your understanding of a challenging text.** Ask questions first. Then infer the answers. Don't worry if you get them right or wrong, just make good guesses. Then, using both your questions and your answers, clarify your understanding of the passage.

## QUESTION

What's a "U-2 flight"?

What's a "blockade"?

What was the "Bay of Pigs"?

How does a blockade "send a clear message"?

What is "escalation"?

They were unsure of what action to take, but convinced that action was called for. By October 19, U-2 flights showed four sites operational. At this time, three options were considered: air strikes, invasion, and blockade. Memories of The Bay of Pigs dampened enthusiasm for sending in troops. And when further assessments suggested that air strikes could result in 10-20 thousand casualties, and another U-2 flight discovered bombers and cruise missiles along the northern shore, a decision was made to put a blockade into effect. A strong but limited action that sent a clear message and left options open if escalation was called for, a blockade was technically an act of war, so the term "quarantine" was used.

## INFER

A "U2 flight" tells them about weapons.

A blockade stops people from coming or going.

The Bay of Pigs was a battle that didn't go well.

The message was to stop building missiles.

Escalation means "going up".

## CLARIFY

They didn't know what the right thing was to do but they knew they couldn't just let them keep building missiles. The invasion seemed too risky because of what had happened before. And air strikes would have killed too many people. The blockade seemed like a good idea because it would stop them from building more missiles but not risk too many lives. They didn't want to start a war, so they called it a quarantine instead.

**2. Improve comprehension by repeating the process.** If parts of the passage still don't make sense, question, infer, and clarify again.



# The Five Facts of Fiction™

**1. Fiction is all about characters.** In biography, we focus on one person. Here, we'll look at Abraham Lincoln as though he was a character in a novel.

Lincoln was hard working and practical. He persevered through failure in his career and tragedy in his family. Though he achieved many things, he never seemed happy. He may have suffered from depression. But that didn't stop him from being one of our greatest presidents.

**2. Fiction is all about what characters want.** What did Lincoln want in his life more than anything else?

Lincoln wanted to rise in politics as far as he could. But once he became president, his personal goals gave way to his obligation to a war-torn country. When the Civil War broke out at the beginning of his presidency, he wanted to hold the country together. Later on, he added to this goal the ideal of ending slavery.

**3. Fiction is all about how characters get or don't get what they want.** Did Lincoln get what he wanted?

Yes and no. The North won the Civil War and brought the South back into the Union by force. Lincoln oversaw the passage of the 13th Amendment to the Constitution outlawing slavery. But he was assassinated by John Wilkes Booth early in his second term and so he did not get to oversee the important, and in many ways flawed, administration of Reconstruction as the country attempted to put itself back together.

**4. Fiction is all about how characters change.** How did Lincoln change?

Lincoln changed in his attitude toward slavery. Early in his life, he seemed willing to accept the idea of slavery existing in the Southern states. But by the middle of the war, he came to regard ending slavery as not only an important political act, but as an important moral act as well.

**5. Fiction is all about a world an author creates.** What kind of a world did Lincoln live in?

Lincoln lived through the most turbulent time in our nation's history. It was a world where people who shared many common values and circumstances became bitterly divided over an issue that had festered for almost 200 years.



# The Five Big Questions™

**1. What makes this work good?** Think about the things that are successful in this work. What has the author done well?

- **Quality.** What aspects or traits of this work represent good results? You may have specific written criteria that describes the qualities people are looking for. How does this work resemble those criteria?
- **Technique.** Quality refers to the finished product. Technique refers to the process of how the product was created. Do you notice the use of any effective techniques?
- **Models.** You may have examples of high quality work to refer to. How does this work compare with those models?

**2. What would make this work better?** Use the same categories from Big Question #1. What could the author do better? Be constructive in your criticism. That is, make sure your criticism gives the author the information he or she would need to construct a satisfactory solution.

**3. What's the one most important thing the author wants you to know about this work?** In a written work, this is the main idea. In other kinds of work, the one most important thing may be a message or conclusion that wraps things up in a single thought. In some circumstances, this message may have less to do with the work and more to do with the person who created it.

**4. Why did the author do this work?** This is the author's purpose. Sometimes we do things just because someone else said we had to. But that's not what we're talking about here. Another way of looking at purpose is to remember "think" and "do."

- **Think.** What does the author want the audience to think?
- **Do.** What does the author want the audience to do?

**5. What does the audience need to know to understand and appreciate this work?** Sometimes we can give people important background information that helps them understand the work and our assessment of it.

# The Three E's of Strong Support™

**1. You can support an argument with examples, explanations, or evidence.** Though any support is better than nothing, the best arguments use all three techniques.

- **Examples.** These are things that represent the point we are trying to make. In writing, they are often presented as little stories sometimes called “anecdotes”.
- **Explanations.** If people don't understand a statement we've made, or if they don't quite believe it, they may ask us to give them an explanation.
- **Evidence.** You can think of evidence as anything you could present in a court of law: facts and figures, quotations, artifacts, etc.

**2. Examples appeal to an audience's emotions.** Here's a writer using examples to talk about a serious problem in professional baseball.

I wonder how Hank Aaron will feel when Barry Bonds breaks his home run record. Records are broken all the time, but it looks like Bonds may have cheated by taking performance-enhancing drugs. Baseball fans everywhere will probably feel a little uncomfortable. And now, no one will know who the real home run king is.

**3. Explanations satisfy our curiosity.** The writer's position here is that Bonds' new record will hurt the game of baseball. This explanation tells why.

Statistics mean more in baseball than in any other sport. And the home run record is the most important statistic of all. When a cloud of suspicion hangs over the man who holds it, a cloud hangs over the entire game. People will just feel bad about it. But there won't be anything they can do.

**4. Evidence.** Here, the writer will use statistics from surveys to give his thesis more credibility. People can always question the legitimacy of evidence, but for the most part, they don't. That's why statistical data is such a popular way to make a point.

Recent surveys tell the story best. More than half of the people who count themselves as serious baseball fans say they will not accept Barry Bonds as the legitimate home run king. And almost two-thirds of fans say the league has been too soft when it comes to the use of performance-enhancing drugs.

# Knowledge Patterns™

## 1. Abstract something important by looking for common elements.

Say we're studying history and that wars keep coming up for us to learn about. Wars are full of battles and we always need to know which battles were important and why. As we study many battles, we see that some elements are the same in every one. Battles usually have two *sides*, they're fought on a certain *date* and in a certain *place*, they have an *outcome* whereby one side wins and another loses, and they have some *importance* in history otherwise we wouldn't be studying them.

**2. Encapsulate the concept so you can use it over and over.** Now we'll use the common elements we abstracted to set up a table we can use to fill in the new information we want to learn.

BATTLE	
Sides	
Date	
Place	
Outcome	
Importance	

**3. Model a new example you are trying to learn about.** To create a model of a particular battle, we fill in the blanks with the right information.

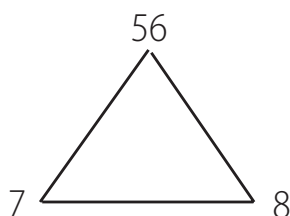
THE BATTLE OF ANTIETAM	
Sides	The Union Army for the North; The Confederate Army for the South
Date	September 17, 1862
Place	Sharpsburg, MD (Antietam Creek)
Outcome	Both sides lost many men but the North is said to have won.
Importance	The loss caused General Lee to call off an invasion of the North. It also kept England and France from supporting the South. And it helped President Lincoln issue the Emancipation Proclamation.

# Associate-Manipulate-Regenerate™

**1. Associate the elements you need to learn.** Put questions with answers, words with definitions, problems with solutions, etc. Here, we'll be using a simple example with multiplication and division facts.

PROBLEM	SOLUTION
$7 \times 8 =$	56
$8 \times 7 =$	56
$56 \div 7 =$	8
$56 \div 8 =$	7

**2. Manipulate the information into a different form.** By changing the form of the information, we give our brain a chance to learn it in a different way. This improves our memory. If we can reduce the amount of information we're working with, that's even better. Here, I'm going to arrange the numbers in a triangle.



**3. Use the manipulated information to help you regenerate the original information you need to know.** Now I can practice my math facts by simply moving around the triangle.

$$7 \times 8 = 56 \quad 8 \times 7 = 56 \quad 56 \div 7 = 8 \quad 56 \div 8 = 7$$

No matter which number I start with or which direction I go, I know I can make a correct answer. In time, I'll be able to reduce the information even farther by throwing away the triangle and just using the three numbers 7, 8, and 56. This is my goal because I want to be able to quickly recall all four facts in the fact family as soon as I see any one of the three numbers.

# Identify-Plan-Execute-Check™

**1. Identify the problem.** The biggest challenge we have often comes from misunderstanding the problem.

- What am I being asked to do?
- If the problem is not stated as a direct question, can I restate it as a direct question?
- What information is available?
- What information is relevant to the solution?
- Is all the information present or does additional information need to be derived?

**2. Plan a solution.** Sketching out a simple plan before you begin working improves your accuracy and efficiency, and helps you spot problems early.

- Does this problem look like one I have solved before?
- Can this problem be broken down into smaller problems?
- Is there more than one way to solve this problem?
- Which part of the problem should I tackle first?

**3. Execute the plan.** Once you've got a plan, carrying it out is easy. All you have to do is follow your own instructions.

- Am I following my plan correctly?
- Am I discovering anything new that would cause me to go back to an earlier stage in this process?
- Am I making progress toward a correct solution?
- Is my work accurate?

**4. Check the solution.** Even with the best plan and the most careful execution you might still make mistakes. Check your work carefully.

- Can I solve the problem again in a different way?
- Does the solution directly address the problem?
- How is the solution to this problem similar to other solutions I have created?
- How can this solution be applied to other types of problems?

# Define-Connect-Extend™

**1. Learning vocabulary is about making associations.** Don't just study a new word and its definition. Study a related set of ideas that are associated with the word. This not only helps you learn the word more effectively, it helps you learn other things (including other new words) at the same time.

**2. Define the new word.** Look at different dictionary definitions but come up with your own in as few words as possible. Focus on language that is simple, accurate, and understandable. Don't make the definition harder to understand than the word you are defining.

phosphorescent = giving off light

**3. Connect the word with its use in a sentence, its origin, synonyms, other forms, etc.** Each time you make a connection, you give yourself another way to learn the new word.

- **Sentence.** "At night, the rock gave off an eery phosphorescent glow."
- **Origin.** From the Greek words "phos" (light) and "phoros" (carrier).
- **Synonyms.** glowing, gleaming, luminous, lustrous.
- **Forms.** phosphorescence (noun), phosphorescently (adverb).

**4. Extend your understanding.** Look for additional information about the word and write down ideas that interest you. Think also about connections to your own life. Often, we've heard words before, or heard about things related to them, that can help us with our understanding.

- Any time we see something that says "glow in the dark" that means it's phosphorescent. It's like that paint people use to put stars on the ceilings in their bedrooms.
- Related to *incandescent* which refers to something that glows when heated. *Phosphorescent* means something that glows when exposed to ultraviolet light.

**1. Arranging information in a grid makes it easier to learn.** The grid improves memorization because it helps us associate information. Every cell in the interior of the grid is associated with two categories and all the other cells with which it shares a horizontal row or vertical column. These relationships help us store and recall information. For example, we can use the chart to extract ideas like this: “To calculate the mechanical advantage of an inclined plane, divide the length by the height to which it is raised.”

**2. Select important elements and their common traits.** Here, we’ve created a grid to help us learn about four simple machines: the inclined plane, the lever, the pulley, and the wheel and axle. For each machine we want to learn the description, real-life examples, and the formula for calculating mechanical advantage.

Four Types of Simple Machines				
Machine	Inclined Plane	Lever	Pulley	Wheel & Axle
Description	A surface that is higher at one end than at the other.	A bar resting on a point (called the “fulcrum”).	A grooved wheel with a rope through it.	A wheel with a rod through the center.
Examples	Ramp, staircase, ladder.	Bottle opener, shovel, wheelbarrow	Flagpole, crane, window blinds	Doorknob, steering wheel, roller skates
Mechanical Advantage	Length divided by Height to which it is raised.	Distance from Fulcrum to Force divided by Distance from Fulcrum to Load.	Number of Ropes.	Radius of Wheel divided by Radius of Axle.



# Ten-Two-Three™

**1. Break large amounts of new information into manageable parts no more than ten minutes long.** Whether you're listening to a lecture, reading from a textbook, or watching a presentation, there's a limit to how much new information you can absorb at one time. Most of us can take in and remember about 10 minutes worth of new content before our attention begins to wander and we start to forget things.

**2. Organize new learning by taking at least two minutes to write down the most important ideas you've just encountered.** Rather than trying to take notes while you learn something new, give your full attention to the information and then take a two-minute break to write down the most important ideas. This keeps you from missing things and getting lost. It also helps you do a better job of only writing down the most important things you've just learned.

**3. Share your ideas with the group and listen to what other people share.** You will hear some of the ideas you just wrote down. But you'll also hear important things you didn't think of. When someone shares something important that you didn't write down, add it to your notes. You may also hear things that help you correct and clarify your ideas. Listen closely during sharing to see how your ideas compare with everyone else's.

**4. Repeat the process as often as you can in the time available.** The Ten-Two-Three process allows you to make one cycle through your material every fifteen minutes. But if you shorten the first block of time, you can increase the number of cycles. In general, the more cycles you make, the more notes you take, and the clearer you become on the material. Feel free to shorten the listening-reading-studying time. But don't cut back on the writing and the sharing. These are the two most important parts.



TEACHING THAT MAKES SENSE

# Learning Patterns

## *Teach Smarter Not Harder*

Imagine a structure 13 years tall, 180 days wide, and five subjects deep. This is a K-12 education. Each cell in this structure represents a single class period in a single subject for a total of 11,700 educational opportunities.

By using *Teaching That Makes Sense® Learning Patterns™* we can reduce this academic load for students, simplify planning and instruction for teachers, and help more kids learn more things in less time and with less teacher effort.

*Learning Patterns* are cross-curricular tools optimized for successful teaching in any subject or grade. They are designed to be used, re-used, and shared across classrooms without requiring extensive training or preparation.

By analyzing standards documents and the methods of effective teachers, *Teaching That Makes Sense* has identified underlying commonalities in learning targets across the curriculum. These commonalities represent dozens of potential assignments that can be taught and learned through a small set of foundational skills.

Consider exposition. Students consume and create expository information in many ways: they read expository texts, write expository essays, create reports, answer test questions, etc. As varied as expository expression is, it has a simple underlying structure that can be explained by a single *Learning Pattern*.

Some *Learning Patterns* cover skills like narration, exposition, and persuasion. Others help teachers and students with things like assessment, reading comprehension, and memorization. The same patterns can be used across grade levels and subject areas as well, so kids take their learning with them as they grow.

*For more information about Learning Patterns click [here](#).*



*“Learning begins with teaching that makes sense.”*

# Agile Transformation

## *Building Collective Capacity for School-Wide Change*

We are discovering better ways of improving schools by doing it and by helping others do it. Through this work, we have come to value:

- **People.** *Individuals and interactions* over policy and politics;
- **Achievement.** *Maximum potential* over minimum competence;
- **Courage.** *Fierce collaboration* over comfortable compromise;
- **Agility.** *Responding to change* over following a plan.

The items on the right are important, but we value the items on the left more.

*Agile Transformation* is grounded in two principles: **(1)** People are more successful when they enjoy their work; and **(2)** Schools are more successful when they support people in developing the autonomy, competence, and relatedness that makes their work more enjoyable. Features of *Agile Transformation* include:

- **Paired Practice.** Nobody works alone. Everyone has a team and a teammate.
- **Rapid Iteration.** Sprint through big problems one small problem at a time.
- **Making Sense.** What do we do? Why do we do it? How do we know it works?
- **“Stand Up” Sessions.** What did you do yesterday? What are you doing today? What do you need to be successful? Agile leaders remove impediments.
- **Successful Failure.** Fail fast, fail smart. No blame games. Apply what you learn as you move closer to your goal with each iteration.
- **Souls and Roles.** Aligning what we do with who we are.
- **“Just in Time” Solutions.** Handle problems as they arise. Respond as needed.



*“Learning begins with teaching that makes sense.”*

# Essential Elements of Agile Schools

## *The Qualities of Effective Educational Communities*

1. **Agile schools work because people choose to make them work.** We believe in freedom of choice, and that making the choice to participate fully in teaching, learning, and leading is the most important choice we can make.
2. **Agile schools love to learn.** We believe that learning is inherently enjoyable and that giving learners a responsible degree of autonomy in their individual pursuit of knowledge and skill makes it even more so. Agile educators are learners, too.
3. **Agile schools take a constructive approach to failure.** We believe failure is a normal part of success. Kids struggle to learn. Teachers struggle to teach. Administrators struggle to lead. We all experience failure on the way to solving new problems. The faster we fail, the more solutions we try. The smarter we fail, the more knowledge we bring to the next iteration. Instead of looking back at problems, Agile schools look forward to solving them.
4. **Agile schools are always getting better.** We believe there's almost always a better way of doing something, and that it's almost always worthwhile trying to figure out what that better way is. Agile schools value progress, and the appropriate measurement thereof, because progress is the true indicator of learning.
5. **Agile schools empower people to empower others.** We believe that individuals—not systems or policies—are the true sources of power in our schools. Our responsibility is to use our power in service of the greater good, and to teach students how to use their power that way, too.
6. **Agile schools achieve extraordinary results.** We believe in transformative learning that goes far beyond incremental improvements in test scores. Adults in Agile schools also strive for extraordinary achievement in their profession as well.



*“Learning begins with teaching that makes sense.”*

# Essential Elements

## *continued...*

7. **Agile schools are based on deeply-held beliefs, clearly-articulated values, and a firmly-rooted sense of commitment.** We believe that the most successful schools are those run by people who know what matters most to them and who possess an unshakable determination to get it.
8. **Agile schools are communities where people make a difference and connect with something greater than themselves.** We believe that the drive to contribute is part of human nature. Our role is to guide people in directing their contribution toward its highest and best use.
9. **Agile schools value ownership, positive attitudes, high expectations, and unwavering optimism.** We believe that making a good life is about making good choices, that the pursuit of happiness is an inalienable right, and that self-mastery is the key to its rightful exercise.
10. **Agile schools embrace the risk inherent in the achievement of great things.** We educate for maximum potential not minimum competence. We believe that all learners have within them extraordinary strengths and untapped resources, and that learning is only limited by our willingness to attempt what has never before been attempted. We welcome change, we innovate, and we seek out challenges that organize and measure the best of our energies and skills.
11. **Agile schools affirm self-knowledge as the most valuable knowledge and self-determination as the most basic right.** We believe that introspection, self-disclosure, and intellectual honesty are essential to personal transformation. We seek to support young people in becoming the adults they want to be.
12. **Agile schools are communities where no one is above the rules, everyone has a voice, freedom is sacred, equity and excellence are not mutually exclusive, and the highest goal of education is contributing to the present and future well-being of individuals who can thrive independently in a modern democracy.** Agile schools value college preparation, career fulfillment, and engaged citizenship, but we value something else even more. Collegiate, career, and civic achievement are important, but they are means to ends, not ends in themselves. Human happiness, meaningful contribution, and sustained well-being of self and community are the ultimate ends to which Agile schools aspire on behalf of the children and families we serve.



*“Learning begins with teaching that makes sense.”*

TEACHING THAT MAKES SENSE



*“Learning begins with teaching that makes sense.”*