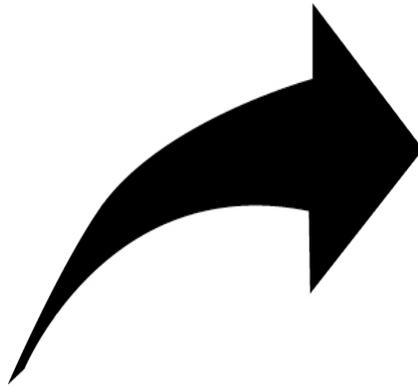


# Meet the NWEA Challenge



## Strategically

Polk Bros. Foundation Center for Urban Education  
<http://teacher.depaul.edu>

## Resources

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# What is the NWEA Reading Challenge?

## **text complexity**

Recommendation:

Guide students to exercise skills with a text they can comprehend fluently, then guide them to apply the skill with more complex texts.

## **Task complexity--levels of questions**

Recommendation:

Guide students to respond to a complex question with steps—for example, figure out what the question is asking; locate the relevant part of the text to respond; analyze the text; evaluate the responses.

## ACTION PLAN FOR NWEA READING PROGRESS

Week	Reading Literature	Reading Nonfiction	Grammar/Syntax

### Recommendations:

- Increase text complexity and guide students to adjust their rate of reading to enable them to comprehend the more complex passages.
- Students make glossaries of literacy terms—with their own examples.
- Students explain what they will find in different genres.
- Students put the number of a question next to the part(s) of a passage they used to figure out the answer.
- Students Have students make up their own guide to NWEA test success.

## Develop Careful Reading Habits

Students need to develop abilities that help them learn more in every subject. In the left column, note a learning ability you will strengthen. In the right column, note how you will guide students to strengthen that ability. We put some examples. Make your own plan.

Reading Habit	How to Strengthen It
Students take time to think; students re-think	Students answer individually, then pair to COMPARE, then repair (choose a better answer)
Students analyze questions before they answer them.	<p>Students restate the question in their own words. Then they “think out loud”—how will I answer it?</p> <p>Students pair and decide what a multiple choice question asks, then decide which is the best answer—this can be done with online questions—“pick carefully before you click”</p>
Read carefully.	<p><i>Make the following steps part of every reading:</i></p> <ul style="list-style-type: none"> <li>• Use context to figure out the meaning of unfamiliar words</li> <li>• Summarize it and then identify the theme (literature) or central idea (nonfiction)</li> <li>• Explain how the author helps the reader understand it—structure of the text, features (nonfiction), techniques.</li> </ul>

## Projects Build Independent Competence

**This list is intended to inspire creative thinking by students.**

**They can choose a task that they apply to a current text.**

1. Advertisement for a book or a genre
2. Autobiography (fictional but realistic) or a character
3. “Before and After” portrait of a character representing changes
4. Biography of a character or real person, with illustrations
5. Cause, effect, indirect effects diagram
6. Debate
7. Dialogue (add to a story or historical event)
8. Diary of a character
9. Draw the setting
10. Exhibit about a time period/context
11. Figurative language list with illustrations
12. Graphic organizers with icons instead of or in addition to words
13. Hats for characters that communicate their traits
14. Illustrations for poems or stories or nonfiction text
15. Journal that a character or person (historical or biography) might have written
16. Letter—from a character to another, from you to the writer, from ... to ...
17. “Map” a story or history OR a science text
18. Nonfiction reader’s guide
19. Novel reader’s guide
20. Poem about or “by” a character or to communicate theme
21. Poem about a science topic
22. Poet’s Toolkit—technique list with examples
23. Questions based on a reading
24. Resume of a character
25. Song about a science or social science topic
26. Story Reader’s Guide—how to read a story
27. Nonfiction Text Writer’s Guide—how to write about a topic
28. Symbol for a character or a theme
29. Timeline for a story—with pictures showing significant events
30. Unpoem—restate a poem in a paragraph
31. Venn diagram to compare and contrast literature or nonfiction
32. Web diagram to represent a theme or central idea—including symbols or drawings
33. Write the next part of a story
34. Write about the topic in a science or social science passage in a book you design for younger students

## Genres Matter

List compiled by the Center for Urban Education (teacher.depaul.edu) based on DesCartes statements. The NWEA RIT levels are included to indicate levels at which NWEA will require students to respond to questions about texts in the genres.

NWEA INFORMATIONAL TEXT GENRES	NWEA LITERATURE GENRES
reference material 221-230	narrative 221-230
persuasive 211-220	autobiography 211-220
true story 211-220	<i>biography</i> 211-220
book review 211-220	folk tale 211-220
journals and specialized periodicals 211-220	poems 201-210
persuasive 211-220	folk tale 201-210
personal writing 211-220	fables 201-210
advertisements 211-220	myths 201-210
textbook 211-220	tall tale 201-210
encyclopedia 201-210	historical fiction 201-210
thesaurus 201-210	fantasy 191-200
informational magazines 191-200	story 191-200
atlas 191-200	poems 191-200
encyclopedia 191-200	fable 191-200
weather reports 191-200	memoir 191-200
advertisements 191-200	play 191-200
informational magazines 181-190	play 191-200
dictionaries 181-190	stories as "make-believe" 181-190
informal notes 181-190	story 181-190
letters 181-190	poems 181-190
journal entry 181-190	fairy tale 181-190
essay 171-180	fairy tale 171-180
newspaper 171-180	stories as "make-believe" 171-180
dictionary 171-180	stories that could happen 171-180
lists 171-180	
thank you notes 161-170 and 171-180	
dictionary 161-170	
short informational passage describing events 161-170	

*What will you do to expand students' knowledge of different genres?*

**Analyze Craft and Structure....** CCSSR5 (writer's choices) and CCSSR6 (purpose)

Students should be able to recognize these when they read and explain why a writer uses them.

Fiction Writers	Poets	Nonfiction Writers	Biographers
<ul style="list-style-type: none"> <li>○ action</li> <li>○ aphorism</li> <li>○ archetype (advanced)</li> <li>○ cliché</li> <li>○ climax</li> <li>○ colloquialism</li> <li>○ conflict</li> <li>○ context clue</li> <li>○ descriptive details</li> <li>○ dialogue</li> <li>○ falling action</li> <li>○ figurative language</li> <li>○ flashback</li> <li>○ foreshadow</li> <li>○ hyperbole</li> <li>○ idiom</li> <li>○ imagery</li> <li>○ irony</li> <li>○ metaphor</li> <li>○ mood</li> <li>○ myth</li> <li>○ narrator</li> <li>○ onomatopoeia</li> <li>○ parallelism</li> <li>○ phrase</li> <li>○ point of view</li> <li>○ qualities</li> <li>○ resolution</li> <li>○ rising action</li> <li>○ scene</li> <li>○ sensory detail</li> <li>○ simile</li> <li>○ stage directions</li> <li>○ suspense</li> <li>○ symbolism</li> <li>○ narration</li> <li>○ tone</li> <li>○ visual detail</li> <li>○ voice</li> </ul>	<ul style="list-style-type: none"> <li>○ alliteration</li> <li>○ assonance</li> <li>○ figurative language</li> <li>○ haiku</li> <li>○ hyperbole</li> <li>○ iambic pentameter</li> <li>○ imagery</li> <li>○ irony</li> <li>○ limerick</li> <li>○ metaphor</li> <li>○ meter</li> <li>○ mood</li> <li>○ narrator</li> <li>○ onomatopoeia</li> <li>○ point of view</li> <li>○ repetition</li> <li>○ rhyme</li> <li>○ rhythm</li> <li>○ satire</li> <li>○ sensory detail</li> <li>○ simile</li> <li>○ stanza</li> <li>○ symbolism</li> <li>○ tone</li> <li>○ visual detail</li> <li>○ voice</li> <li>○ word play</li> </ul>	<ul style="list-style-type: none"> <li>○ anecdote</li> <li>○ argument</li> <li>○ boldface</li> <li>○ captions</li> <li>○ claim</li> <li>○ compare</li> <li>○ context</li> <li>○ contrast</li> <li>○ data</li> <li>○ debate</li> <li>○ description</li> <li>○ details</li> <li>○ dialogue</li> <li>○ examples</li> <li>○ graph</li> <li>○ headings</li> <li>○ humor</li> <li>○ illustrations</li> <li>○ main topic</li> <li>○ narrative</li> <li>○ point of view</li> <li>○ primary source</li> <li>○ quotations</li> <li>○ persuasive</li> <li>○ sequence</li> <li>○ strength of support</li> <li>○ table</li> <li>○ text structure:               <ul style="list-style-type: none"> <li>cause-effect</li> <li>compare/contrast</li> <li>description</li> <li>problem-solution</li> <li>sequence</li> </ul> </li> <li>○ thesis; antithesis</li> <li>○ timeline</li> <li>○ titles and subtitles</li> <li>○ tone</li> <li>○ topic sentence</li> <li>○ transition</li> <li>○ viewpoint</li> <li>○ voice</li> </ul>	<p><i>A biographer may use many of the nonfiction writer's techniques as well as techniques of the story writer. Usually, these techniques are part of a biography.</i></p> <ul style="list-style-type: none"> <li>○ challenges</li> <li>○ commentary</li> <li>○ conflict</li> <li>○ context details</li> <li>○ dialogue</li> <li>○ mood</li> <li>○ quotations</li> <li>○ perspectives</li> <li>○ tone</li> </ul>

## Genre-Focused Learning Activity *Examples*

### Poetry

Picture the <b>important words</b> in the poem—words that give the reader an image.
Analyze a poem, <b>restate the meanings of important lines</b> .
Make <b>metaphor or simile</b> chart: word in column 1; picture in column 2.
List <b>examples of techniques</b> the poet used. Explain how they helped communicate the theme.
<b>Write a poem</b> that <b>communicates</b> the same <b>theme</b> .

### Nonfiction

Use <b>nonfiction features</b> to <b>identify important ideas and information</b> . Then make a “learner’s guide”—how do you learn when you read nonfiction?
<b>Clarify structure</b> of a text: <b>Outline passage</b> , identifying <b>important ideas</b> and <b>supporting information</b> . <b>Identify central idea</b> . <b>Summarize</b> the passage, stating <b>central idea</b> .
<b>Analyze Cause-Effect</b> : Make timeline of important events in a <b>nonfiction narrative--</b> biography or history. Explain an important <b>choice, causes</b> and the <b>effects</b> of that choice.
<b>Integrate information</b> : Identify <b>relevant information</b> from two different articles to respond to a <b>constructed response prompt</b> .
<b>Compare and contrast</b> ideas and content of two different texts on same topic.

### Fiction--Elements of Fiction—Author’s Choices

<b>Sequence--</b> make timeline of events in a story--identifying important actions. Identify <b>causes and effects</b> of an event.
Complete "map" a story", <b>characters</b> and <b>setting; problem</b> and <b>solution</b> .
Write concise <b>summary</b> . Decide which event(s) are most important and how the writer uses them to communicate the <b>theme</b> .
<b>Infer the theme</b> of the story and <b>support analysis with evidence</b> based on the author's choices. (NWEA uses main idea and also theme in different questions.)
<b>Compare and contrast</b> two stories with same theme.
<b>Plan a story</b> to communicate a theme (or main idea—NWEA term).

### Fiction--Character Development

*Also can apply to biography analysis.*

Complete <b>character analysis</b> chart: how author communicates the <b>traits</b> and <b>feelings</b> of characters in the story-- <b>actions, dialogue, reactions</b> of characters.
Add <b>dialogue</b> to a story—what might the characters have said at different points?
<b>Dramatize</b> a story, <b>selecting events important to the character’s development</b> and adding dialogue that communicates how the central character develops.
<b>Analyze how the author uses the character’s development to support the theme of the story</b> .
<b>Synthesis</b> : Write the next part of the story—tell what the character does next.

## NWEA Reading Test Vocabulary Terms

CCSSR4—expand academic vocabulary.

*This list includes all levels on NWEA—identify the terms that fit your grade.*

alliteration	analogy	anecdote
anthology	antithesis	aphorism
archetype	assonance	author's purpose
characteristics	characterization	cliché
climax	colloquialism	conclusion
conflict	connotation	consonance
context	detail	dialogue
diary	drama	emotion
entertain	evaluate	event
evidence	exaggeration	example
excerpt	exposition (fiction)	fable
falling action	fantasy	feeling
fiction	figurative language	Figure of speech
First person	Flashback	Folk tale
Foreshadow	Formal essay	genre
historical fiction	humor	hyperbole
iambic pentameter	idiom	illustration
image	imagery	irony
legend	literary device	literary element
literature	main character	metaphor
meter	minor detail	mood
moral	myth	narrate
narrative	narrator	novel
omniscient	onomatopoeia	order of events
oxymoron	parable	paradox
paragraph	parallelism	passage
Phrase	Play	plot
plot twist	poem	poet
poetry	point of view	predict
problem and solution	pun	qualities
repetition	resolution	resolve
rhyme	rhythm	riddle
rising action	satire	scansion
scene	second person	selection
sensory detail	sequence	setting
short story	simile	sonnet
stanza	structure	summarize
summary	support	suspense
symbol	symbolism	symbolize
synecdoche	tale	tall tale
theme	third person	third person objective
third person omniscient	title	title page
tone	trait	viewpoint
voice	word play	world literature

## Author's Technique Examples

List Author's Techniques in the left column.

Then in the right column write an example—from a passage or one you create.

Technique	Example

**You can turn this into a matching game.**

Cut out the items and mix them up.

Then ask other students to match the example with the technique.

# Story Reader Requirements and Resources

## NWEA Skills Categories: FICTION

### **COMPREHEND: What does the story tell me?**

locates information  
infers meaning  
makes predictions  
draws conclusions

### **ANALYZE TO INFER**

The following NWEA skills relate to inferring the theme or moral of a story.

summarizes  
infers/analyzes theme/lesson/moral/main idea of a story or other work of literature

### **INTERPRET:**

What structure and techniques does the author use to communicate the theme?

setting  
character  
plot—sequence, cause and effect, conflict/resolution  
author's viewpoint  
tone  
point of view  
dialogue  
foreshadowing  
irony  
mood  
imagery and sensory language  
figurative language  
similes and metaphors  
idioms  
symbolism  
(See the list of techniques for more specifics.)

## Strengthen Student Strategies: READING FICTION

NWEA Competence	Strategy
All competencies	<ul style="list-style-type: none"> <li>• Confirm that you know what the terms mean--explain what the literature term means with an example: character trait, inference, theme, plot, other terms—see list of terms.</li> <li>• Read a question, decide how to figure out the best response, then evaluate which answer is best.</li> </ul>
Figure out the theme of a story	<ul style="list-style-type: none"> <li>• Identify the important events.</li> <li>• Figure out what lesson or message the author wants the reader to understand because of those events.</li> </ul>
Infer character traits	<ul style="list-style-type: none"> <li>• Identify actions a character takes.</li> <li>• Figure out what trait those actions show the character has.</li> </ul>
Identify techniques an author uses.	<ul style="list-style-type: none"> <li>• Identify techniques used in a story.</li> <li>• Explain how the technique an author uses helps you understand the characters, setting, or plot of a story.</li> </ul>
Interpret complex text	<ul style="list-style-type: none"> <li>• Adjust rate of reading to complexity of text.</li> <li>• Read the story completely, then revisit it to respond to questions.</li> </ul>

## Choose a Project to Build Story Analysis Skills

Write an ad for a book.	Write an advice letter to a character.	Make up the Autobiography of a character.
Draw pictures of the characters in the story.	Make up dialogue for a story—add it to the story.	Write the diary of a character.
Draw the setting of a story.	Design hats for characters that communicate their traits.	Illustrate a story
Write the journal of a character.	Make up “tweets” from characters about their story.	Make up questions about a story—give them to another student.
Write a song based on a story.	Write the next part of the story	Write your own story.
Turn part of a story into a play.	Turn part of a story into a cartoon.	<i>Your turn—what’s a smart activity you want to do?</i>

## Comprehensive Fiction Assessment

*This assessment can be used with any story. It emphasizes CCSSR1, Read Closely, then make logical inferences with evidence, and CCSSR2, Determine theme and summarize supporting details and ideas.*

### 1. Identify Sequence:

What happened at the end? \_\_\_\_\_

### 2. Infer Character Traits:

What does **trait** mean? \_\_\_\_\_

Name one character in the story. \_\_\_\_\_

What is one trait you infer that character has? \_\_\_\_\_

**Evidence:** Explain why you think that.

\_\_\_\_\_

### 3. Identify cause and effect of important event. What is an important event in the story?

\_\_\_\_\_

**Infer cause:** What caused that event?

\_\_\_\_\_

**Infer effect:** What happened because of that event?

\_\_\_\_\_

### 4. Summarize the passage in 2 sentences. Tell what is most important.

\_\_\_\_\_

\_\_\_\_\_

### 5. Infer the message or theme: What is the theme of the story?

\_\_\_\_\_

*Why do you think that is the theme?*

\_\_\_\_\_

\_\_\_\_\_

### 6. Identify techniques. List three techniques the author used.

\_\_\_\_\_

## My First Baseball Game

I remember everything about my first Cubs game, although it was a few years ago. My uncle came to take me to it on a Saturday in spring, a bright sunny day. He drove all the way from Indiana to Chicago to pick up me and my brother. We didn't take his car to the game. We traveled by train to the ballpark because he said traffic would be impossible.

He was right about how crowded it would be. When we got there it was so crowded people were walking in the street, and the cars were moving so slowly. I was only 10, not very tall at all, so it was hard to see over all the people who crowded the street. Finally, we got to the entrance, and then we went to our seats after we handed in our tickets.

We had tickets that were for seats far back, and it seemed like I climbed forever to get to them. When we got there I realized that even though we were at the upper level, I could see everything clearly, the entire field. It was great—seeing it this way was much better than watching it on TV.

Then the game started, and everyone cheered when the Cubs came out on the field. People around us were clapping and shouting. The man next to me said, "This is going to be the year. This year they're going all the way."

My uncle said to him, "Let's hope this is the one." But then he whispered to me, "I think he is too hopeful. We'll have to wait and see. I always start the year thinking they'll win the World Series, but then I remember the last year. They started the season winning and then they had a long losing streak."

"Hey, Hey, Hey!" The Cub batter hit a ball that soared out of the ball park.

Just then I heard "Hot dogs!" "Peanuts!" I looked and saw a vendor with a big tray hanging from his shoulders full of hot dogs in plastic wrap and bags of peanuts.

"Two hot dogs," my uncle shouted, and he gave the man next to us \$4 to pass along down to the man with the hot dogs. He sent back two steaming hot dogs.

"This is great," I said to my uncle as I started to eat my hot dog.

"Not so great," he said. "We just struck out. This inning is not a winning one. Baseball is a game of predicting. The batter has to predict what the angle of the ball will be and determine if it will be a good one to swing at or if he should just let it go past because it's not a good one to hit. The batter has seconds to make that decision. The batter has to keep his eye on the ball and guess. So baseball is a game of skills and choices"

It continued that way for the rest of the game, with us enjoying the food, and my uncle saying "maybe next time" each time a player swung at a bad pitch. We bought peanuts, we even got another hot dog. I had never eaten such

delicious hot dogs. We'd hope every time a batter started out, and then were disappointed as one by one they struck out and retired back to the bench. Still, it was a really pleasant day with great food, fine weather, and special time with my uncle. The final score was 7 to 0, so it was nine innings of hoping and then losing. We were disappointed about that score, but otherwise it was a perfect day.

"Tomorrow, they'll win, I'm certain!" I heard one person say as we left to go home. "Definitely," another replied. "The pitcher tomorrow is terrific, they'll get it done tomorrow."

When we were returning, I asked my uncle, "Why were they so optimistic when the score was 0 today—how can they be sure they'll win tomorrow?"

"That's what it means to be a Cubs fan: we believe in tomorrow. When they win, it's the best. If they lose we expect it will get better, even though experience may tell us it won't. Every year, we hope; every game we hope, and we don't abandon hope, that's loyalty. It's about supporting your team no matter what. Cubs fans are loyal. I've been coming to the Cubs games for 25 years, and I keep coming, win or lose. It's about believing in the team, about being loyal to your team."

"I see what you mean. Thanks for taking us; thanks for being loyal to us."

Guess what happened the next year. The Cubs won more games, including a game my uncle took us to. They were getting better at making those choices. We went to a few games that year. And the next year we were there, too, cheering, even if they lost.

Then, it was amazing what happened this year. The Cubs won the whole thing—they won the World Series. Their fans were so excited—I've never seen adults scream and jump up that way. I called my uncle the next day. His voice was like a whisper, and I could hardly hear what he said.

"Are you sick?" I asked.

"No way," he answered. I was shouting so much last night I lost my voice. Win or lose, I always support that team, but it feels so good when they win. They may never win another World Series, but I'll always remember this year. And I'll always be loyal—they're my team, win or lose."

*This story is an example of realistic fiction. Realistic fiction tells a story that could have happened. Some authors include facts about events that really happened in the story. This story does include an actual event. **The Cubs did win the World Series in 2016.** Their fans had been hoping for a very long time for that win. But that is an event, it is not the theme of the story.*

**Think More** (Analyze a story to identify the theme—CCSSR2)

Which of these is the theme of the story?

never give up     be loyal no matter what happens     baseball is a game of skills

Explain why you think that is the theme.

# POETRY READER RESOURCES

## NWEA Poetry Interpretation

The following competencies are specified for poems.

- **Compares content/concepts**
- **Analyzes the mood**
- **Identifies specific forms**
- Analyzes poems to **determine the main idea**
- **Compares** poems to determine the **common theme**
- Analyzes poems to **identify the theme** or main idea
- **Identifies the mood** in a poem
- **Infers the author's viewpoint**

## POETRY INTERPRETATION QUESTIONS

**Before/At Beginning of Reading** What kinds of things does a poet do to write a good poem?

Students should read a poem at least two times so first they appreciate it and then interpret it.

<b>After First Reading</b>	<b>After Second Reading</b>
<p><b>Infer from Context</b> What does the word _____ mean? <i>Why do you think so?</i></p> <p><b>Analyze Mood</b> How does the poet want you to feel? <i>Why do you think that?</i></p> <p><b>Analyze Structure</b> Why does the poet start with the first sentence—what does the poet want you to think about because of that first sentence? Why does the poet end with the last sentence? What does the poet want to be sure you think about because of that last part?</p> <p><b>Identify/Infer the Main Idea or Theme</b> What is the main idea or theme of the poem? State it in a sentence. <i>What parts of the poem communicate that theme?</i></p>	<p><b>Identifies specific form of poem</b> Which kind of poem is it? (limerick, haiku, sonnet are examples). How do you know?</p> <p><b>Analyze Author’s Techniques</b> What technique does the writer use? rhyme repetition irony sensory language simile metaphor symbolism figurative language</p> <p><i>How does that technique help the poet communicate the idea or theme of the poem?</i></p> <p><b>ADVANCED:</b> <b>Compare this poem to another poem or to a story with a similar theme.</b> <i>How are they alike?</i> <i>How are they different?</i></p>

## Poem Analyzer *Italicized items are NWEA specifications.*

### First time you read a poem, enjoy it!

Note what you like about the poem. Draw a picture that shows what you see when you read it.

### Second Time: Interpret It.

CCSSR2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

*(191) Analyzes poem to determine main idea. (NWEA uses main idea and theme.)*

What is the theme? \_\_\_\_\_

What is one statement from the poem that best represents that theme or main idea?

*(221) Evaluates statements to choose the one which best represents the main idea of a poem*

\_\_\_\_\_

How does the author feel about the topic? \_\_\_\_\_

*(191) Infers author's viewpoint (term not used) in poems.*

What does the writer include that tells you that? \_\_\_\_\_

\_\_\_\_\_

### Third Time, Analyze how the writer helps you understand the poem.

CCSSR4. **Interpret words and phrases** as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.

What is the mood of the poem?*(181)* \_\_\_\_\_

List one line that shows that mood. *(181)* \_\_\_\_\_

\_\_\_\_\_

Look for examples of these kinds of words and phrases. List one you find (if you find it).

Tell what it means.

simile (181)	
metaphor (201)	
image (201)	

**Think More** Explain how the writer helps you understand the poem. (191)

**Do More** Write your own poem about the same theme.

# Poem Planner

CCSSW4-5. Organize a poem to communicate a theme.

**Start with your vision: Draw a picture or write to explain what you want the poem to communicate.**

**Plan it here.**

What ideas and examples will you put into your poem?

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**Techniques I will use**

<input type="radio"/> alliteration	<input type="radio"/> detail	<input type="radio"/> hyperbole	<input type="radio"/> metaphor
<input type="radio"/> onomatopoeia	<input type="radio"/> personification	<input type="radio"/> repetition	<input type="radio"/> rhyme
<input type="radio"/> simile	<input type="radio"/> symbol	<input type="radio"/>	<input type="radio"/>

# NONFICTION READER RESOURCES

## Informational Text Skills

NWEA includes items that require students to identify and analyze text with these skills.

### GET IT!

- ✓ Locate Information
- ✓ Topic and subtopics
- ✓ Describe
- ✓ Key Details
- ✓ Sequence
- ✓ Structure of the text

### GET IT CLEAR!

- ✓ Infer
- ✓ Draw Conclusions
- ✓ Cause/Effect
- ✓ Compare/Contrast

### THINK IT THROUGH!

- ✓ Summarize
- ✓ Central Idea or Main Idea
- ✓ Synthesize

### EVALUATE IT!

- ✓ Author's Viewpoint/Bias
- ✓ Point of View/Purpose
- ✓ Facts vs. Opinions
- ✓ Claims and support
- ✓ Validity of Information
- ✓ Author's Style/Technique
- ✓ Persuasive Language

## NONFICTION *STRATEGIES* ENABLE READERS TO USE SKILLS

Numbers in parentheses indicate applied Common Core reading standards.

Strategy	Got it	Working on It
Preview a passage. (R1 and R5)		
Establish a purpose for reading. (RF4)		
Skim a text to see major visual patterns—see how the pages are organized. (R5)		
Identify structure of text—how did the author organize it? (R2 and R5)		
Use index, glossary, table of contents. (R1 and W7)		
Adjust reading rate to level of text difficulty (R1 and R2)		
Ask questions during reading; annotate text to identify relevant ideas and information as well as questions to consider (R1 and R2)		
Use word structure, context, and (if available) glossary to determine meanings of academic vocabulary. (RF3 and R4)		
Take Notes as you read—stop to list what’s important (R1 and R2)		
Identify important ideas —then revisit the text to find examples that support them. (R2 and R1)		
Locate information related to a question (R1 and W7)		
Summarize—list, then summarize important ideas and information (R2)		
Infer word meaning with evidence—support your answer with information (1 and 4)		
Look for important ideas—stop after a section and figure out what’s important. (R2)		
Re-read to clarify ideas. (R1 and R2)		
Paraphrase—restate the author’s main points. (2)		
Use graphic organizers—“web”, Venn, cause-effect, other ways to analyze relationships in a text. (R2 and R3)		
Analyze relationship between author’s purpose (R6) and choices of content. (R5)		
Use headings, structure of text to locate information. (R5)		
Combine information and ideas from different texts or other sources. (R7)		
Contrast two different texts on the same topic in terms of purpose and content included to accomplish it. (R6, R9)		
Evaluate the strength of evidence to support a claim/position (R2, R5 and R8)		

# COMPREHENSIVE ASSESSMENT: **Non-Fiction**

*This assessment can be used with any nonfiction.. It emphasizes CCSSR1, Read Closely, then make logical inferences with evidence, and CCSSR2, Determine theme and summarize supporting details and ideas.*

1. **What is the topic?** \_\_\_\_\_

*The topic is not the title.* What is the topic that the passage explains?

2. **Infer the main idea of a paragraph:** What is the main idea of the first paragraph?

\_\_\_\_\_

Why do you think that is the main idea of the first paragraph?

\_\_\_\_\_

3. **Classify Fact and Opinion:** What is an opinion in the passage?

\_\_\_\_\_

*Explain: How do you know it is an opinion?*

\_\_\_\_\_

4. **Identify and Analyze a Claim:** What is a claim that the writer makes?

\_\_\_\_\_

*How does the writer support it?*

\_\_\_\_\_

5. **Infer the central idea of a passage.** What is the central or main idea of the whole passage?

\_\_\_\_\_

Support your answer. Explain why you think that is the main idea.

\_\_\_\_\_

\_\_\_\_\_

6. Identify two techniques the writer used.

\_\_\_\_\_

\_\_\_\_\_

## Jean Baptiste Pointe DuSable

Before there was a city of Chicago, a man came here to start a business. It was very hard to live here then. There were no stores. There were no streets. It was very cold in the winter and hot in the summer. There was a lot of snow in winter, too. In spring, there was a lot of rain and mud. It was hard to travel.

### Building a Trading Post

Then Jean Baptiste Pointe DuSable came to this place. He is a really great African American hero who lived here long ago. DuSable built a cabin on the Chicago River. He started a business by trading with Native Americans. He opened a **trading post** here in the late 1770s. A trading post is a place where people bring things they have and trade them for things they need. At first, it was just a small home. But he stayed for more than 20 years and built a key business.

Getting things to Chicago was hard. Chicago was many miles away from any city. At first, DuSable traded only with the Native Americans and explorers. He would give them tools and other goods and he would get back things that they grew, hunted, or made. The trading post helped explorers to keep going. They could buy supplies at his post. This would let them travel further.

### Helping Chicago Grow

That trading post helped Chicago grow. **Pioneers** are people who do something new. Pioneers changed Chicago. They moved to Chicago to live. They got what they needed at the trading post. To live in this area, pioneers needed his business. They got many things from the trading post to start their homes. DuSable sold blankets, butter, furs, knives, cloth, and guns.

Jean Baptiste Pointe DuSable left Chicago in 1800. He sold his trading post, so it stayed open. It was an important place in Chicago.

### Leaving a Legacy

DuSable left a legacy. A legacy is something that lasts. His trading post helped people settle in Chicago and stay here, too. That is why Chicago called him the “father” of the city. He made it possible for the city to start.

Today there is a harbor named for DuSable. There is a park too. That park is near where he started the first Chicago business. His trading post was the starting point for making the town that became today’s big city. So his trading post is the most important business in Chicago’s history. Without it, pioneers could not have stayed to build the community.

Chicago is a wonderful city. DuSable is a very important part of this great city’s history.



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## NONFICTION WRITERS USE TEXT FEATURES TO COMMUNICATE IDEAS

### Text Features of Nonfiction

- ✓ Diagrams
- ✓ Charts
- ✓ Graphs
- ✓ Maps
- ✓ Glossary
- ✓ Bibliography
- ✓ Author's Biography
- ✓ Index/Table of Contents
- ✓ Label
- ✓ Schedule
- ✓ Guide Words
- ✓ Headings and subheadings
- ✓ Title
- ✓ Caption
- ✓ Boldface
- ✓ Primary source
- ✓ Secondary Source



## Reference Sources Support Nonfiction Learners

NWEA questions include items that ask students how to use these, items that ask which source to use to accomplish a task such as “Which would you use to write a paper about a historic event.” This list includes all levels of NWEA.

Some items such as the Annotated Bibliography would not be relevant to earlier grades.

1. Almanac
2. Annotated Bibliography
3. Dictionary
4. Encyclopedia
5. Field Guide
6. Formal Essay
7. Magazine
8. Manual
9. Newspaper article
10. Primary source
11. Report
12. Science Text

## Reference Sources

List Reference Sources in the left column.

Then in the right column tell how a reader would use each one.

Reference Source	How Readers Use this Reference Source

**You can turn this into a matching game.**

Cut out the items and mix them up.

Then ask other students to match the source with the way to use it.

**Grammar,  
Syntax,  
Punctuation**

# **rules and patterns**

**help writers communicate and readers  
comprehend.**

## Grammar, Punctuation, Syntax Rules and Patterns

Numbers indicate RIT levels on NWEA. These are essential to all readers and writers.

<p>161-170 capital letter comma contraction exclamation mark period question mark sentence fragment</p> <p>171-180 apostrophe past tense possessive Chooses the correct prefix (re-) Chooses the correct prefix (un-) Chooses the correct suffix based on context (-er) Chooses the correct suffix based on context (-ful) Chooses the correct suffix based on context (-less) Chooses the correct suffix based on context (-y)</p> <p>181-190 adverb colon compound sentence heading hyphen plural proper noun punctuate quotation quotation mark run-on sentence semicolon singular subject verb agreement tense verb phrase</p>	<p>181-190 AFFIXES Recognizes multiple meanings of homographs Selects the correct definition of a suffix (-phobia) Selects the correct meaning of a prefix and root word; Selects the correct meaning of a word based on its prefix Selects the correct word when given the definition of the suffix Selects the correct word when given the definition of the suffix and root word Uses prefixes, suffixes, and root words (meaning of each part given) to construct a word with a given meaning</p> <p>191-200 abbreviation clause formal language future tense imperative sentence interjection main clause main heading part of speech predicate proofread simple sentence Chooses the correct word based on context and knowledge of a suffix (-ist) Chooses the prefix that when added to a given root word will best complete a given statement (e.g., inter-, de-, mis-, re-, in-, dis-, tri-, pre-, il-)</p>
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## Grammar, Syntax, Punctuation Rules and Patterns

<p>201-210</p> <p>active voice</p> <p>adjective clause</p> <p>adjective phrase</p> <p>adverb clause</p> <p>antecedent</p> <p>capitalization</p> <p>common noun</p> <p>complex sentence</p> <p>compound-complex sentence</p> <p>conjunction</p> <p>declarative sentence</p> <p>dependent clause</p> <p>direct object</p> <p>direct quotation</p> <p>gerund</p> <p>independent clause</p> <p>introductory sentence</p> <p>irregular verb</p> <p>linking verb</p> <p>modifier</p> <p>multiple meaning word</p> <p>noun clause</p> <p>noun phrase</p> <p>parentheses</p> <p>participial phrase</p> <p>preposition</p> <p>present tense</p> <p>singular noun</p> <p>subordinate clause</p> <p><b>prefixes and suffixes</b></p> <p>Analyzes similar words to determine the meaning of a prefix</p> <p>Determines the meaning of a word when a prefix of given meaning is attached to that word</p> <p>Determines the meaning of an adjective from</p> <p>Gives the meaning of the prefix un-</p> <p>Gives the meaning of words (meaning of root given) that contain the prefix pre-</p> <p>Identifies words (containing prefixes and/or suffixes) that come from the same root or base word</p>	<p>Selects the correct definition of a suffix (-phobia)</p> <p>Selects the correct meaning of a prefix and root word</p> <p>Selects the correct meaning of a word based on its prefix</p> <p>Selects the correct word based on the suffix and definition</p> <p>Selects the correct word when given the definition of the suffix</p> <p>Selects the correct word when given the definition of the suffix and root word</p> <p>Uses prefixes, suffixes, and root words to construct a word with a given meaning</p> <p><b>211-220</b></p> <p>Comma Splice</p> <p>Fragment</p> <p>Participial</p> <p><b>221-230</b></p> <p>dash</p> <p>ellipsis</p> <p>infinitive</p> <p>italics</p> <p>predicate noun</p> <p>reflective pronoun</p> <p><b>231-240</b></p> <p>appositive</p> <p>objective pronoun</p>
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# Make It Clear

## The Poet's Punctuation Tool Kit

Punctuation helps make meaning clear. Poets need to use it carefully. Complete this Punctuation Tool Kit so you can make your ideas very clear when you write a poem.

### Commas separate words in a series.

Our example: I saw a cat, a bat, a hat. Then I sat.

Your example: \_\_\_\_\_

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### Commas separate independent clauses joined by conjunctions.

Our example:

The dinosaur ate one bush, and then it ate a tree. Dear me!

Your example: \_\_\_\_\_

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### Commas set off introductory phrases and clauses.

Our example:

In fact, punctuation is one of the most helpful ways to make meaning clear in a poem.

Your example: \_\_\_\_\_

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**Apostrophes help people use fewer letters.**

Here's our example: It's important to use apostrophes correctly.

*What's your example?* \_\_\_\_\_

\_\_\_\_\_

**Apostrophes show possession.**

Our example: Jerome's poem was full of rhyming words.

\_\_\_\_\_

\_\_\_\_\_

**Exclamation points show importance.**

Our example: Without punctuation, my poem doesn't make sense!

*Your example:* \_\_\_\_\_

\_\_\_\_\_

**Periods help people abbreviate.**

E.g.: Etc., III.

*Your examples:* \_\_\_\_\_

\_\_\_\_\_

**Periods show what's over.**

Our example: This is the end of the punctuation part of the poet's tool kit.

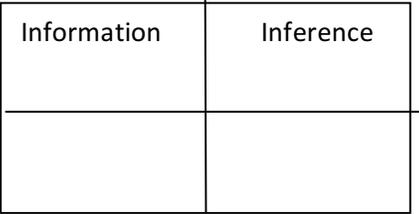
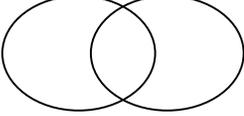
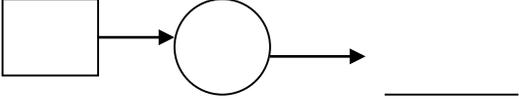
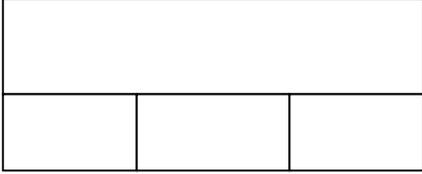
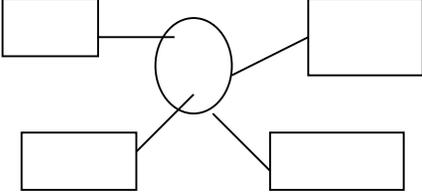
*Your example:* \_\_\_\_\_

\_\_\_\_\_

## **Assess and RESPOND to Build Competence and Confidence**

## Use Graphic Organizers to Assess and Improve

After students complete a graphic organizer, they should pair and compare and then REPAIR—improve their response.

<p><b>SUPPORT INFERENCES</b></p>  <p><i>Explain how the information supports the inference.</i></p>	<p><b>COMPARE/CONTRAST</b></p>  <p>✓ <i>Include the most important similarities and differences.</i></p>
<p><b>SEQUENCE EVENTS</b></p>  <p>✓ What is the most important event?          ✓ <i>What caused it?</i>          ✓ <i>What changes did it cause?</i></p>	<p><b>CAUSE-EFFECT-PREDICTION</b>          Complete this diagram to show cause-effect—and your prediction of what will happen</p>  <p>✓ <i>Include enough information so that someone else will see your idea clearly</i></p>
<p><b>MAIN IDEA</b>          Identify the main idea and three supporting facts.</p>  <p>✓ <i>State your idea clearly</i>          ✓ <i>Support it with important facts</i></p>	<p><b>ANALYZE THEME</b>          Complete this diagram to show how the writer communicates the theme.</p>  <p>✓ <i>Include important examples the writer uses to support the theme.</i></p>

## Question Builders

The following question frames can be used by teachers to focus students on specific interpretation and analysis skills. The students should read the entire selection and then respond to specific questions. **Students also can construct their own questions with these frames.**

### Infer word meaning from Context

- What does \_\_\_ mean in paragraph \_\_\_?
- Which word in paragraph \_\_\_ helps the reader understand the meaning of \_\_\_?
- Which word best defines \_\_\_ [a word] as used in this sentence?
- In paragraph \_\_, it says ... What is a \_\_\_\_\_?
- Which of these is the meaning of \_\_\_\_\_ as used in paragraph n?
- Which of these is closest in meaning to \_\_\_ as used in the passage?
- Which word in paragraph \_\_\_ helps the reader know what \_\_\_\_\_ means?
- What phrase means the opposite of \_\_\_\_\_ as used in paragraph x?
- What does the word \_\_\_\_\_ mean in paragraph x?

### Use etymology (upper grade)

- Based on the etymology of the word \_\_\_\_\_, what does \_\_\_\_\_ mean?

### Synonyms and Antonyms

- Which word from means the same as \_\_\_ in paragraph \_\_\_?
- What is a synonym for \_\_\_\_\_ in paragraph n?
- Which would be the best synonym for \_\_\_?
- Which is the antonym of \_\_\_\_\_?

### Classify Genre

- What is the genre of \_\_\_\_\_?
- Which term best describes this type of literature?

### Locate Information

- What question does the article answer?
- What was one way that \_\_\_\_\_?

### Analyze details

- Which word from paragraph \_\_\_ shows that \_\_\_\_\_?
- Which word best describes \_\_\_\_\_

### Analyze a Table, Chart, Other Source in Nonfiction

- Which conclusion does the table support?
- According to the article and the map, in which place \_\_\_\_\_?
- According to the chart, which statement is true?

**Compare/Contrast**

- How is \_\_\_\_ different from \_\_\_\_?
- Which of these is most like \_\_\_\_\_
- \_\_\_\_ and \_\_\_\_ were alike because they both \_\_\_\_\_

**Analyze Plot**

- What is the purpose of \_\_\_\_? [an action by a character]
- Which of these best describes the problem in the passage?
- How do \_\_\_\_\_'s feelings change from the beginning to the end?

**Analyze Sequence and Infer Cause-Effect**

- What do the people do last at \_\_\_\_\_?
- According to the passage, which of these happened first?
- According to the passage, what causes \_\_\_\_?
- How did \_\_\_\_ change \_\_\_\_\_
- What is the most likely reason \_\_\_\_?
- What happened because \_\_\_\_\_?

**Analyze characters**

- What is the most important thing \_\_ learns about himself?
- How does \_\_ *most likely* feel about \_\_\_\_?
- How does \_\_ [a character] change from the beginning to the end of the passage?
- Which words best describe \_\_\_\_\_'s character?

**Infer motive**

- Why does \_\_\_\_\_ feel \_\_\_\_?
- Why does \_\_\_\_\_ do \_\_\_\_\_?

**Infer a prediction**

- After reading the title, what should you expect to learn from this selection?
- After reading the passage, which is the most likely to occur?

**Structure of the Passage**

- Which is true of paragraphs \_\_ and \_\_?
- Which of these best describes the organizational pattern in paragraph 3?
- How does the author organize paragraphs x through x?
- Why is paragraph \_\_\_\_ important in this selection?
- How does the author organize the information in this article?

**Setting**

- Which does “\_\_\_\_\_” suggest about the setting?
- Which detail explains the setting?

**Summary**

- Which phrase *best* summarizes paragraph \_\_\_?
- What is the passage *mainly* about?
- Which is the *best* summary of “\_\_\_\_\_”?

**Interpret Figurative Language**

- What does \_\_\_\_\_ mean as used in the passage?
- Which of these is a metaphor?
- How does the narrator describe \_\_\_\_\_?

**Theme (fiction and poetry) or Central Idea (nonfiction)**

- What is the main idea of paragraphs \_\_\_-\_\_\_?
- Which sentence from paragraph \_\_\_ expresses the main idea of the paragraph?
- Which of these is a theme of this story?
- What is another good title for this passage?

**Distinguish minor and significant details**

- Which of these is a minor detail in the passage?
- Which of these is an important detail that supports \_\_\_\_\_?

**Identify Opinion**

- What is an opinion from the story?
- Which of these is an opinion from the passage?
- Which sentence best describes the author’s opinion of \_\_\_\_\_?
- What statement from the passage is an opinion?  
Which of these statements is a fact?

**Support for a Claim**

- Which sentence from the passage *best* support the idea that ...?
- How does the author support the idea that \_\_\_\_\_?
- Which claim is supported by evidence from “\_\_\_\_\_”?

**Author’s techniques**

- Why does the author compare \_\_\_ to \_\_\_?
- What is the *main* purpose of \_\_\_\_\_ [a text feature]?
- Which statement from the passage best represents \_\_\_\_\_’s mood in paragraph \_\_\_?
- Why did the author include \_\_\_\_\_ in paragraph \_\_\_?
- Why does the author include these details?
- Why does the author include the phrase \_\_\_?
- Which literary device is used in the sentence below?
- What literary device is used in the text below?
- Which of these techniques did the author use in the story?

**Infer Mood**

- What is the mood in most of the story?
- How does the author create the mood?

**Infer Tone**

- In paragraphs xx to xx, what is the author's tone?
- What is the tone of the passage?
- Why does the narrator refer to \_\_\_\_ as \_\_\_\_\_?

**Identify point of view**

- From which point of view is the passage told?
- In this poem, which point of view does the poet use?

**Author's Purpose**

- Which does the author want the reader to learn from this passage?
- What is the author's *main* purpose for comparing \_\_\_\_ to \_\_\_\_?
- What was the author's purpose in writing \_\_\_\_\_?
- What is the most likely reason the author wrote this selection?
- Why did the author write this selection?

**Infer the Author's Point of View**

- With which statement would the author most likely agree?
- What is the author's point of view?

**Identify Genre and Purpose of the Genre**

- Which would be the best to read to learn how to \_\_\_\_\_?
- In which book would this selection most likely be found?
- Who would be most likely to use this article?
- Which book would the author most likely have used to write this selection?
- Which of the following books would most likely contain information about \_?
- This selection is an example of which kind of literature?
- What type of story is \_\_\_\_\_?

## ONLINE NWEA READING RESOURCES

Sample Questions from NWEA

[http://warmup.nwea.org/warmup\\_start\\_educators\\_map.html](http://warmup.nwea.org/warmup_start_educators_map.html)

Minnesota School District Resource for grades 3-5

<http://www.ahschools.us/Page/17389>

Practice Tests from an Online Source for Math and Reading Including all Grades <http://www.prepdog.org/>

Link to a School District posted on a CPS School website

<http://www.sowashco.org/ro/pages/studentlinks/map/reading.htm>

# The NWEA Math Challenge:

Know What—content

Know How—skills and strategies

## MAKE STRATEGIC USE OF ONLINE RESOURCES

- Choose an online resource each week for students to use at home.
- Students work with a partner, and agree on which answer is best before they “click” online questions.
- Students decide which kind of skill is most difficult for them and then use Khan Academy to work on that skill.

### Sample Test Questions

Sample Test Items from NWEA

[http://warmup.nwea.org/warmup\\_start\\_educators\\_map.html](http://warmup.nwea.org/warmup_start_educators_map.html)

Rochester School District Links to Khan Academy

<http://www.rochester.k12.mn.us/common/pages/DisplayFile.aspx?itemId=5588106>

Link to a School District posted on a CPS School website

<http://www.sowashco.org/ro/pages/studentlinks/map/>

Sample Questions from an Online Source for Math and Reading all Grades

<http://www.prepdog.org/>

Minnesota School District Resource for grades 3-5

<http://www.ahschools.us/Page/17389>

### Math Guides from Khan Academy

Study Recommendations from Khan Academy

<https://www.khanacademy.org/mappers?gclid=CNvDsdL249ICFdi6wAodY2IBrw>

# Meet the NWEA Math Challenge

## Your Plan to Meet the NWEA Challenge

What will you do? Check and add activities you'll do.

### Know What: Math Fact Activities

- matching game
- vocabulary glossary
- times table practice
- flash cards

\_\_\_\_\_

\_\_\_\_\_

### Know How: Math Skill Activities

- use online math skill games
- use online math test prep
- answer question, pair, compare, repair
- make up word problems
- make up multiple choice questions
- play math games

\_\_\_\_\_

\_\_\_\_\_

### Test Success Activities

- rank answers to a multiple-choice question
- change a test item—substitute different numbers, then solve it
- make up my own test prep guide
- make up multiple choice questions
- take online math test

\_\_\_\_\_

\_\_\_\_\_

## SCHEDULE MATH PROGRESS

In addition to the new math that students learn, it's **important to** revisit math they mastered in the past but have not used recently. Research confirms that if the math curriculum includes “frequent cumulative review” that enables students to retain greater math competence. Among sources supporting this “mix” is the report “Assisting Students Struggling with Mathematics” of the What Works Clearinghouse, IES Practice Guide, US Department of Education.

Week	New Math	Content to Revisit	Featured Strategies

**KNOW WHAT: Problem Solvers need to know VOCABULARY!**

Students can make their own glossary—and turn it into a matching game—word and example—including pictures.

**By Third Grade**

12 inches = 1 foot 12 months = 1 year 2-dimensional 3 feet = 1 yard 365 days = 1 year 366 days = 1 leap year 3-dimensional 52 weeks = 1 year 7 days = 1 week a.m. abbreviations for days and months about above addends addition (+) angle area average bar graph below between capacity cardinal numbers centimeter (cm) cents (50¢ or \$0.50) chance change chart circle circle graph cone congruent coordinates corner cube cup	cylinder decimal diameter difference digit distance divisible division (+, /) dollars (\$) dozen drawn to scale edge/edges equal equation estimate/estimation even/even number face/faces factor farthest figure flips folded foot/feet (ft) fraction gallon gram (g) graph greater greatest grid group height hexagon histogram horizontal hour	hundred impossible inch (in.) is equal to (=) kilogram (kg) is greater than (>) is less than (<) is not equal to (≠) kilometer (km) label least least likely length less than likely line line graph line of symmetry line segment long mass measure measurement meter (m) metric mile (mi) milligram (mg) milliliter (mL) millimeter (mm) minus month more than most most likely multiply/multiplication (x) nickel	non-standard unit number cube number line number pair number pattern number sentence octagon odd/odd number operation order ordered pair (x, y) ordinal numbers ounce (oz) p.m. pair parallel parallelogram pattern pentagon perimeter pictograph pie graph pint place value plane figure plus point polygon possible pound (lb, #) prediction prism probability probable probably problem solving	product pyramid quadrilateral quart quarter quotient radius/radii ray reasonable rectangle rectangular prism rectangular pyramid represents results rhombus right angle round down round up same scale scale of numbers second segment set shape side/sides similar single size solid figure solve spent sphere spinner square square centimeters square pyramid	standard unit steps subtraction (−) sum survey symbol symmetry/symmetrical table tally tally chart temperature thousand time ton total trapezoid triangle triangular prism triangular pyramid true turns twice unit unknown unlikely value variable Venn diagram vertex/vertices vertical volume week weight wide width yard
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(Source: ISBE.net)

**By Fifth Grade**

acute angle	least common multiple
angle	liter (L)
approximately	lowest terms
arc	mean (arithmetic average)
base	median
bisect	midpoint
characteristic	miles per hour (mph)
chord	mode
circumference	multiple
column	multiply/multiplication (* or •)
combination	nonagon
composite number	<i>n</i> th term
congruent	obtuse angle
coordinate graph	order of operations
correspond	per
cubic units	percent (%)
data	perpendicular
decimeter	pint (pt)
degrees (°)	polygons
degrees Celsius (°C)	portion
degrees Fahrenheit (°F)	prime number
diagonals	proportion
diagram	quart (qt)
dimensions	quotient
dividend	random
divisor	range
elapsed time	ratio (":" or "to")
equilateral triangle	reflections
exactly	regular polygon
expression	right angle symbol
gallon (gal)	right triangle
greatest common factor	rotations
heptagon	row
intersect	scale drawing
intersecting lines	scalene triangle
irregular polygon	sequence
is approximately equal to	slides
is congruent to ( $\cong$ )	square units (2)
is parallel to ( $\parallel$ )	stem-and-leaf plot
is perpendicular to ( $\perp$ )	time zone
is similar to ( $\sim$ )	ton (t)
isosceles triangle	triangle ( $\Delta$ )
	value of

**By Eighth Grade**

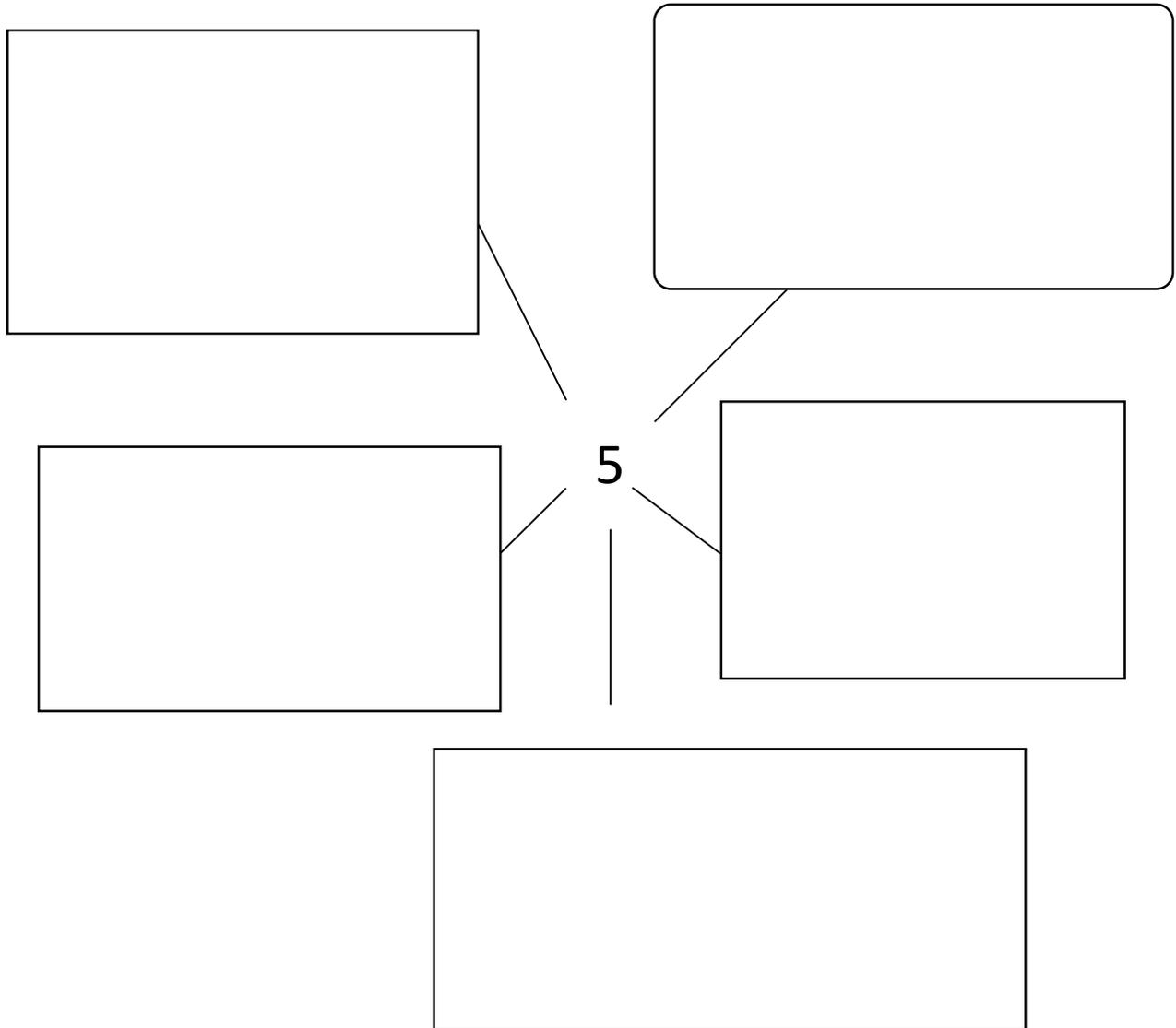
adjacent	measure of angle
alternate exterior angles	minimum
alternate interior angles	odds
altitude	permutation
approximate	principle
ascend/ascending order	proportionally
axes	Pythagorean Theorem
commission	quadrants
complementary	radical
compound inequality	random
consecutive	rate
convert	real number
corresponding angles	satisfy
decagon	scattergram
descend/descending order	semi-circle
discount	sequence
distinct	simple interest
divisibility	skew
domain	square root
down payment	supplementary
earnings	surface area
factorial	transversal
foot (ft or ')	vertical angles
function	x-axis
hypotenuse	y-axis
inch (in. or ")	
independent	
inequality	
is greater than or equal to ( $\geq$ )	
is less than or equal to ( $\leq$ )	
maximum	

(Source: ISBE.net)

## KNOW WHAT: Learn Math Facts by USING them.

CCSS Math Practice Standard 2. Reason abstractly and quantitatively.

Task: Use the math you know to show five different ways to make equations that result in 5. It could be fraction equations or multi-step addition or...



*You can do this same activity with any number!*

## MATH VOCABULARY AND FACTS MATCHING GAME

Put the words, letters, or numbers you want to learn into each rectangle. Then cut them out and use them as flash-cards or to play matching games or card games.


**EXAMPLE: TIME TABLE FACTS**

Put facts like these on pieces of paper. Cut them out and match them.

$2 \times 4$

8

$3 \times 4$

12

$4 \times 4$

16

$5 \times 4$

20

## **KNOW HOW: ANALYZE the problem first, THEN solve it.**

**The most important skill to respond to a test question is reading the question carefully.**

Before you answer the question, ask these questions:

1. What is the question asking me?
2. What skills will I need to figure out the answer?
3. What information from the problem will I use?

## KNOW HOW: TAKE TIME TO SOLVE A PROBLEM STRATEGICALLY

(CCSS Math Practice Standard 1)

**The Problem**—What will I figure out?

***My Strategy***

***MY SOLUTION***

***My Answer:***

## KNOW HOW: I can solve a word problem strategically!

*Math Practice Standard 1: Make sense of problems and persevere in solving them.*

What is the question asking me to figure out? 	
How will I solve it? 	
What information do I need to solve it?	

### Next: Solve it!

You may complete it by yourself or...

pair and share—work together to solve it

or

pair to compare—solve it yourself then compare your work with another student's

## Make Math Yours: Learn Actively

### Pair, Compare, Repair

1. Two students solve the same problem independently.
2. Then they pair and compare their responses.
3. Then they repair—change any part of the answer that needs improvement.

### Rate the Answers

1. Take one multiple-choice question.
2. Choose the **best** answer.
3. Then label the **worst** answer.
4. Then, yes, pair, compare, repair.

### Make up a Word Problem

1. Think of a situation that involves math. It could be about money, measurement, any other part of math.
2. Make up a problem that requires someone to use skills to solve it.
3. Give your problem to another student.
4. Check that student's answer.
5. If it's incorrect, explain how to fix it.

### Make up a Multiple-Choice Question

1. Make it a word problem.
2. Include four answers.
3. Give your problem to another student.
4. Check that student's answer.
5. If it's incorrect, explain how to fix it.

## Make Your Own Multiple Choice Question

**Question Maker:** Write your question here.



Write the correct answer and three other possible answers here:

- a. \_\_\_\_\_ c. \_\_\_\_\_  
b. \_\_\_\_\_ d. \_\_\_\_\_
- 

### **Question Taker:**

*Circle the best answer. Then tell why it's best.*

\_\_\_\_\_ is the best answer because

---

*Cross out the worst answer. Then tell why it's the worst.*

\_\_\_\_\_ is the worst answer because

---

**YOU CAN MAKE YOUR OWN MATH PROBLEM GAME!**

Cut paper into rectangles.

Put numbers and operation signs and words on the rectangles.

Then use them to make up problems. *This is just an example*—make YOUR OWN!

**+****-****X****=****10****5****15****50****%**



## Choose a Math Strategy: It's Like Chess

Here are some strategies to solve a math problem.

**They all start with read the problem carefully to figure out what it asks.**

Read it TWICE so you are sure what the problem is.

- ✓ Identify information the problem includes that you need to use to solve it.
- ✓ Notice any numbers written as words—be sure you include them in your problem solution.
- ✓ What kinds of words, numbers or shapes will answer the question—for example, will the answer be a label for an angle, a percentage, a decimal?
- ✓ Estimate what the answer will be.

Then use a strategy you know to figure out the answer.

**Here are some examples.**

**Choose the strategies you will use.**

**Add more strategies!**

- List information you need to use.
- Use a model.
- Use a rule you know.
- Make a diagram.
- See if it will take just one step to solve it or more steps.
- Guess, check, then correct if I need to.
- Look for a pattern.
- Draw a picture so I see what the problem includes.
- Figure out what information I need.
- Underline the information I need and cross out the things I don't need.
- List the steps to take.
- Make a chart.
- Work “backwards”.
- Think of two different ways to solve it, then choose the one you think will work better.
- Write it as a number sentence.

\_\_\_\_\_

\_\_\_\_\_

## Choose Activities to Make More Math Progress

<p><b>Play math games!</b> Monopoly or any game that includes math.</p>	<p><b>Make up an online Store</b> Make up the prices. Look at the competing online stores to set your prices. Make “specials”—coupons or sales.</p>	<p><b>Make a math multiple choice question.</b> Write the question as a situation. Then give a few possible answers.</p>	<p><b>Make up a math game.</b> To win the game, you need to know math facts. You can play the game as a card game or as a board game. If it’s a board game, then the players would get to move ahead when they know a math fact.</p>
<p><b>Write a Number Diary.</b> What’s That? You’re a Number (pick any number). Tell what happens to you during a day.</p>	<p><b>Measure Your Home.</b> <i>Measure windows, doorways, floor. First, estimate size. Then check your estimate. Figure out the area of different rooms.</i></p>	<p><b>Tell what you would buy if you had \$100.</b> Figure out what everything would cost and how much you would have left after you bought things.</p>	<p><b>Write a page in a math textbook.</b> Explain the math. Then give an example. Then ask a question.</p>
<p><b>Watch a sports game. Keep track of the scores for each player.</b> Then make up math questions based on the scores.</p>	<p><b>Make a fraction book.</b> Write about what a fraction is, how people use them, and how people can add and subtract them.</p>	<p><b>Write about your day and how numbers help you.</b> For example, numbers tell what time it is.</p>	<p><b>Make a sports scores graph.</b> Then explain what your graph tells about the way the teams are playing this season.</p>
<p><b>Make a Math Number Connector.</b> What’s that? You take one number and put it in the center of a page. Then write the number combinations that would make that number. For example, what are five ways to make a five?</p>	<p><b>Design a math museum.</b> What will your exhibits include?</p>	<p><b>Paper Airplane Math</b> Make a paper airplane. See how far it flies. Then change one measurement at a time; its weight, length, or width. See how those changes affect how far it goes.</p>	<p><b>Design a birdhouse.</b> Use your measurement and geometry skills. If you can, build it!</p>

# How Will You Use Online Resources to Prepare for the NWEA Math Test Challenge?

## NWEA Online Resources

Sample Test Items from NWEA

[http://warmup.nwea.org/warmup\\_start\\_educators\\_map.html](http://warmup.nwea.org/warmup_start_educators_map.html)

Study Recommendations from Khan Academy

<https://www.khanacademy.org/mappers?gclid=CNvDsdL249ICFdi6wAodY2IBrw>

Rochester School District Links to Khan Academy

<http://www.rochester.k12.mn.us/common/pages/DisplayFile.aspx?itemId=5588106>

Link to a School District posted on a CPS School website

<http://www.sowashco.org/ro/pages/studentlinks/map/>

Sample Questions from an Online Source for Math and Reading all Grades

<http://www.prepdog.org/>

Minnesota School District Resource for grades 3-5

<http://www.ahschools.us/Page/17389>

## Math Practice Resources and Games

Early Childhood Games <http://www.ictgames.com/resources.html>

Primary Games from Public Television <http://pbskids.org/games/math/>

Math Games for Grades 3-5 <http://pbskids.org/cyberchase/math-games/>

Great games to practice math facts. <http://www.maths-games.org>

Advanced Challenges from the Museum of Math

<http://momath.org/activities/>

Activities for Home and After-School Programs from the Exploratorium

<http://www.exploratorium.edu/education/publications/math-explorer>

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## **General Math Skills Activity Sites**

### **Math Hunt**

With the help of the character “Number Cruncher” scour the web to find social studies and science information to help crack math problems.

<http://teacher.scholastic.com/mathhunt/>

### **Math Maven’s Mysteries**

Use math to help crack open mystery cases

<http://teacher.scholastic.com/maven/>

## **Counting/Number Activity Sites**

### **Bobbie Bear**

Use counting strategies to make as many outfits for Bobbie Bear as you can, using different colored shirts and pants.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=3>

### **Chairs**

Explore the number of chairs needed when tables are arranged in a restaurant.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=144>

### **Electronic Abacus**

Explore an abacus model for representing numbers and performing addition.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=8>

## **Operations Activity Sites**

### **Primary Krypto**

Use five number cards and arithmetic operations to create the "target" number in this fun math game.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=173>

### **Product Game**

Exercise your skill with factors and multiples.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=29>

### **Times Table**

Practice multiplying single-digit numbers with this interactive multiplication table.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=155>

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## **Operations Activity Sites**

### **Around the World in 80 Seconds**

Help Maggie fly around the world. Pick addition, subtraction, multiplication, division or a mix of all four. Each question answered correctly gets Maggie to her next stop.

<http://teacher.scholastic.com/activities/adventure/math2.htm>

### **Deep Sea Duel**

Play a strategy game that requires you to select cards with a specified **sum** before your opponent.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=207>

### **Determine the Missing Operation Study Jams**

Sometimes to solve a word problem or story problem, you need to figure out which symbol to use. Follow this step-by-step strategy

[http://teacher.scholastic.com/activities/studyjams/math\\_operations/](http://teacher.scholastic.com/activities/studyjams/math_operations/)

### **Flashcards for Basic Arithmetic**

Flashcards for all operations, organized by level.

<http://free-ed.net/sweethaven/Math/arithmetric/arithDrill02.asp>

### **Operations with Signed Numbers**

Use these "flash cards" to work with an endless list of signed-number problems--addition, subtraction, multiplication, and division of both positive and negative numbers.

[http://www.free-ed.net/sweethaven/Math/arithmetric/SignedValues01\\_EE.asp](http://www.free-ed.net/sweethaven/Math/arithmetric/SignedValues01_EE.asp)

### **Operations with Whole Numbers**

A complete set of activities featuring arithmetic operations with whole numbers. Activities can be assigned according to level of difficulty as well as special features such as division with/without remainders.

[http://207.5.42.159/sweethaven/math/pre-algebra/prealg01/ee/wholenuml02\\_ee.asp](http://207.5.42.159/sweethaven/math/pre-algebra/prealg01/ee/wholenuml02_ee.asp)

### **Order of Operations with Integers**

This is a set of endless drills that build confidence with solving integer operations that involve combinations of addition, subtraction, multiplication, and division. There are four levels of difficulty.

[http://www.waybuilder.net/sweethaven/Math/pre-algebra/PreAlg01/ee/IntegerPrec01\\_EE.asp](http://www.waybuilder.net/sweethaven/Math/pre-algebra/PreAlg01/ee/IntegerPrec01_EE.asp)

### **Periods of Place Values**

Rewrite numbers separating each period of place values with a comma

<http://www.waybuilder.net/sweethaven/Math/pre-algebra/drills/wholeNums01.asp>

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## **Geometry Activity Sites**

### **Proof Without Words: Pythagorean Theorem**

Watch a dynamic, geometric "proof without words" of the Pythagorean Theorem.  
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=30>

### **Scale Factor**

A common misconception is that when the dimensions of an object are doubled, the area is doubled, too. But this is not true! Use this applet to investigate how changes in the scale factor influence the ratio of perimeters and the ratio of areas between figures.  
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=176>

### **Shape Cutter**

Draw and cut shapes, then use slides, turns, and flips to move the cut pieces around.  
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=72>

### **Shape Sorter**

Sort shapes according to their properties using Venn diagrams.  
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=34>

### **Shape Tool**

Draw, color, paste, slice, rotate, reflect, expand, and contract various shapes.  
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=35>

### **Tessellation Creator**

Create patterns to cover the screen using regular polygons.  
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=202>

### **Turtle Pond**

Estimate length and angle measure while guiding a turtle to a pond.  
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=83>

### **Interactive Geometry Dictionary: Areas in Geometry**

Understand and investigate the area of the rectangle, parallelogram and triangle.  
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=21>

### **Patch Tool**

Design a pattern using geometric shapes.  
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=27>

### **Perimeter, Area, and Volume of Common Geometric Figures**

[http://www.waybuilder.net/sweethaven/Math/pre-algebra/PreAlg01/ee/geometry/PreGeom01\\_EE.asp](http://www.waybuilder.net/sweethaven/Math/pre-algebra/PreAlg01/ee/geometry/PreGeom01_EE.asp)

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## **Geometry Activity Sites**

### **Angle Sums**

Explore the sum of the interior angle measures for various polygons.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=9>

### **Area Tool**

Investigate how changes in the base and height of trapezoids, parallelograms, and triangles affect their area.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=108>

### **Circle Tool**

Compare the circumference and area of a circle to its radius and diameter.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=116>

### **Cube Nets**

Examine various two-dimensional figures to determine which ones can be folded into a cube.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=84>

### **Computing Pi**

Compare two methods for computing pi.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=161>

### **Cubes**

Determine the volume of a box by filling it with cubes, rows of cubes, or layers of cubes.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=6>

### **Fractal Tool**

Explore iteration and patterns in shapes and numbers with fractals.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=17>

### **Geometric Solids**

Manipulate various geometric solids. Color the solid to investigate properties such as the number of faces, edges, and vertices.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=70>

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## **Time, Speed, and Distance Activity Sites**

### **Distance to Horizon**

Investigate the relationship between your height above the Earth and the distance you can see to the horizon.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=150>

### **Sound Sketch Tool**

Sketch and quantify sound using two different representations.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=36>

### **Vector Investigation: Boat to the Island**

Adjust the magnitude and direction of a velocity vector to "drive" a boat.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=42>

### **Vector Investigation: Dual Vector, Airplane Storm Chaser**

Adjust the magnitude and direction of a velocity vector and a wind vector to "fly" a plane.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=43>

### **Word Problems: Time, Speed, and Distance**

Practice your knowledge of time, speed, and distance with word problems

<http://www.waybuilder.net/sweethaven/Math/pre-algebra/dstProblems01.asp>

## **Probability Activity Sites**

### **Adjustable Spinner**

Create a spinner and examine the experimental and theoretical outcomes for a specified number of spins.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=79>

### **Fire**

Simulate the spread of a wildfire using a probability applet.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=143>

### **Random Drawing Tool—Individual Trials**

Explore the relationship between theoretical and experimental probabilities.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=67>

## **Fractions, Decimals, and Percentages Activity Sites**

**Concentration**

Play a matching game with different representations of equivalent items — match quantities to their numerals, shapes to their names, or fractions to decimals and percents.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=73>

**Equivalent Fractions**

Create equivalent fractions by shading squares and circles.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=80>

**Fraction Game**

Explore relationships among fractions while playing this interactive game.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=18>

**Fraction Model**

Explore different representations for fractions.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=45>

**Fractions, Fractions, Fractions**

This is version 2.0 of the popular fractions "flash cards." Fractions are learned by looking at a lot of examples and they are mastered by doing a lot of problems.

<http://edgeroamer.com/sweethaven/math/ee/fracs03.asp>

**Fractions Study Jams**

Watch a video and take a quiz about understanding fractions

<http://teacher.scholastic.com/activities/studyjams/fractions/>

**Free Ride**

Use this applet to explore fractions using the context of a bicycle and gear ratios.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=178>

**Mastering Decimal Fractions**

This is a complete set of endless drills with decimal arithmetic. You can select among 24 different activities that are arranged according to type of operation and level of difficulty.

[http://www.waybuilder.net/sweethaven/Math/pre-algebra/Decimals01\\_EE.asp](http://www.waybuilder.net/sweethaven/Math/pre-algebra/Decimals01_EE.asp)

**Rounding Decimal Fractions**

Activities for practice of rounding decimal fractions

[http://www.sweethaven.com/sweethaven/Math/pre-algebra/PreAlg01/ee/DecRound01\\_EE.asp](http://www.sweethaven.com/sweethaven/Math/pre-algebra/PreAlg01/ee/DecRound01_EE.asp)

**Working with Percents**

Practice percent problems, converting between decimals and percents, and determining parts and rates

[http://www.waybuilder.net/sweethaven/Math/pre-algebra/PreAlg01/ee/Percent01\\_EE.asp](http://www.waybuilder.net/sweethaven/Math/pre-algebra/PreAlg01/ee/Percent01_EE.asp)

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## **Algebra Activity Sites**

### **Algebraic Transformations**

Explore commutativity and associativity within a geometric situation.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=193>

### **Pan Balance—Expressions**

Investigate the concept of equivalence by "weighing" numeric and algebraic expressions.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=108>

### **Pan Balance—Numbers**

Find equivalent numerical expressions using a balance scale.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=26>

### **Pan Balance—Shapes**

Explore relationships among weights of various objects by placing them on either side of a balance scale

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=33>

### **Roots and Powers**

Some problems require the aid of a calculator, while others encourage the learner to work the problem "on paper."

[http://www.free-ed.net/sweethaven/Math/pre-algebra/RootPow01\\_EE.asp](http://www.free-ed.net/sweethaven/Math/pre-algebra/RootPow01_EE.asp)

### **Solving Linear Equations in One Variable**

A list of activities for solving linear equations in one variable for independent learners

[http://www.waybuilder.net/sweethaven/Math/algebra/linearEq/LinEqOne01\\_EE.asp](http://www.waybuilder.net/sweethaven/Math/algebra/linearEq/LinEqOne01_EE.asp)

## **FACTORS**

### **Factor Game**

A game that exercises your factoring ability. Test your skills against a human or the computer.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=12>

### **Factorize**

Divide numbers into two factors, and build arrays to represent each factorization.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=64>

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## **Graphing Activity Sites**

### **Bar Grapher**

Create a customized bar graph with your own data, or display a bar graph from an included set of data.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=63>

### **Box Plotter**

Create a customized box plot with your own data, or display a box plot of an included set of data.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=77>

### **Circle Grapher**

Create a customized circle graph with your own data, or display a circle graph from an included set of data.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=60>

### **Histogram Tool**

Create a customized histogram with your own data, or display a histogram from an included set of data.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=78>

### **Introduction to Graphing**

Here is a selection of graphic activities, from plotting points to plotting linear equations.

[http://www.free-ed.net/sweethaven/Math/GraphOps/GraphPlotters/graphing02\\_EE.asp](http://www.free-ed.net/sweethaven/Math/GraphOps/GraphPlotters/graphing02_EE.asp)

### **Isometric Drawing Tool**

Create dynamic drawings on isometric dot paper. Draw figures using edges, faces, or cubes, and then shift, rotate, color, decompose, or view them in 2-D or 3-D.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=125>

### **Line of Best Fit**

Use this applet to plot a set of data and determine a line of best fit.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=146>

### **Linear Regression**

Investigate a regression line and determine the effects of adding points to a scatterplot.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=82>

### **Mean and Median**

Investigate the mean, median, and box-and-whisker plot for sets of data that you create.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=160>

### **State Data Map**

Use color-coding to represent state information, such as population, area, and gasoline usage.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=151>