

Premise:

- ***Research is the opposite of reading a textbook. A textbook gives you answers for you to absorb and memorize. Research is the search for answers – and your questions, and research skills, determine what you will find.***
- ***Research should take you to unexpected places so you just need the tools and skills to make sense of what you find.***
- ***Research should end with a conclusion that’s wrapped up to communicate (usually via technology).***
- ***If you’re only stating facts, it’s reporting—not research.***

-Marc Aronson and Paige Jaeger
From our Scholastic Reading Summit



What's An *Essential Question* (EQ)?

Compelling Question?

... question which students should be able to answer, *after* they have manipulated the content.

The answer will be a "knowledge product;" a possible solution; a conclusion;

... written, technology, debated, etc. graded often via rubric, which answers the original question.

Umbrella Question?

Problem Question?

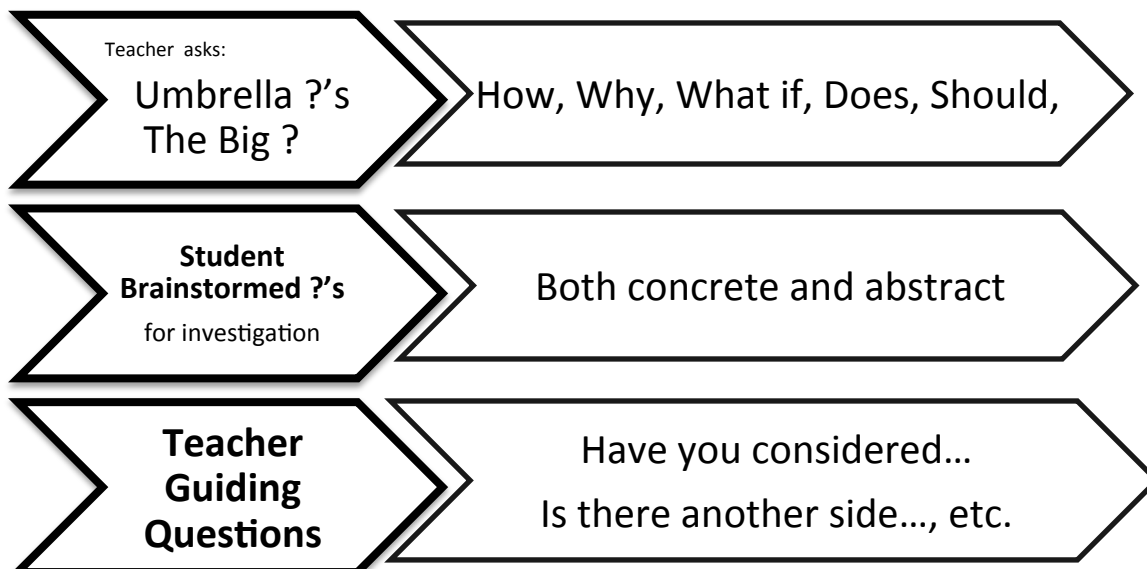
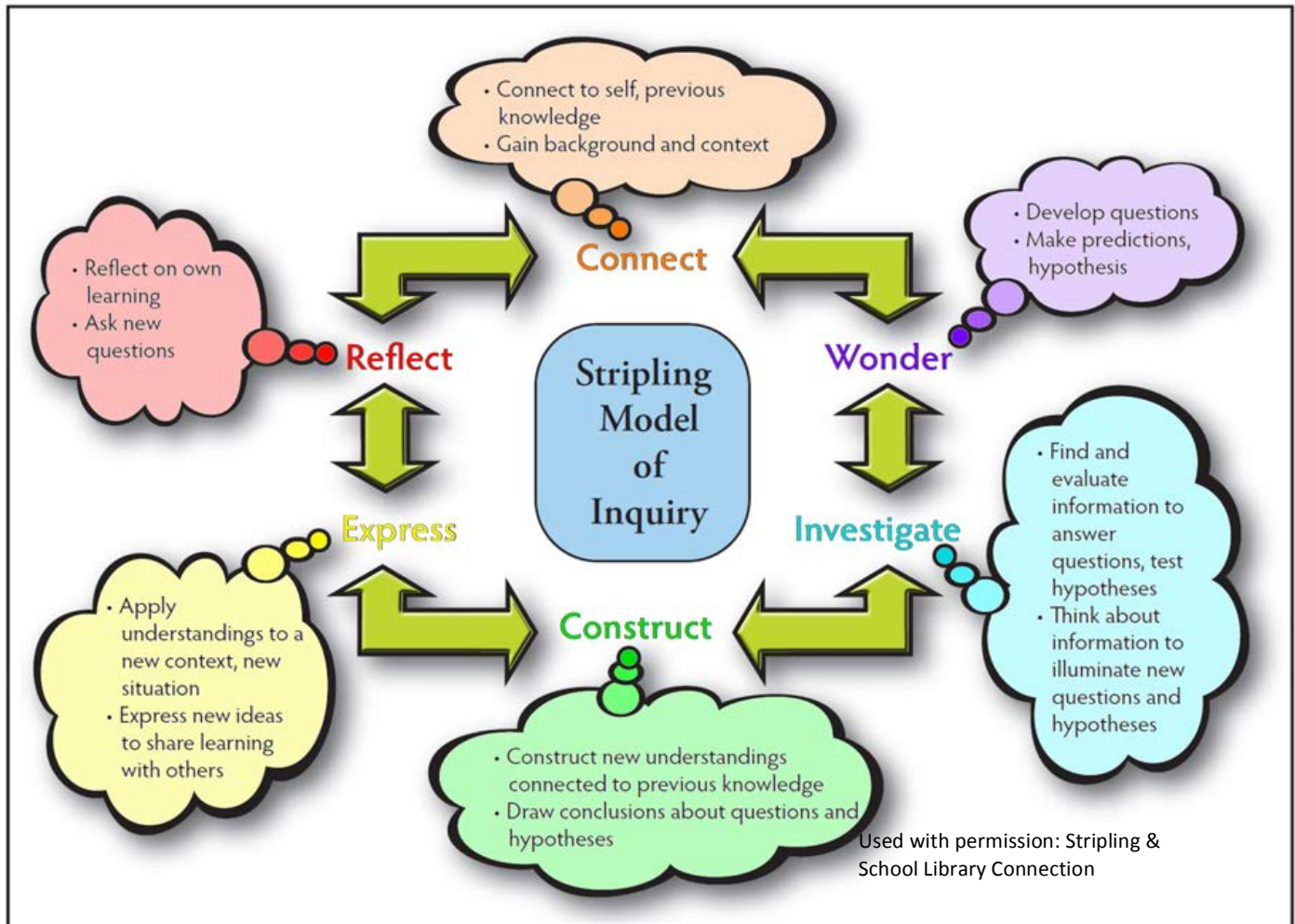
Wonder Question?

Characteristics:

- Drives instruction... Begin with the end in mind – Wiggins & McTygue
- Provide direction
- Are arguable and important
- Often start with **HOW? WHY? WHICH? WHAT IF? SHOULD? SO WHAT?**
- Real life
- Raise more questions
- Require a conclusion, a resolve or action, a choice, a decision, or an opinion to be supported with evidence
- Cannot be answered by yes or no or a "fact"
- *Shifts ownership to the student!*

Consider...	Essential Question Brainstormer
<p>Content – Enduring understanding... What is the moral of the story?</p>	
<p>Possible arguable points:</p>	
<p>Is there a real life connection?</p>	
<p>Cannot be answered by multiple choice ... and may be unanswerable – may have more than one right answer</p>	
<p>Often include pronouns: If ... you, us, we,</p>	
<p>Often start with ... How Why Which What if, Should So what</p>	

What is INQUIRY?



What is INQUIRY?

Think of teachers as...

- Content framers
- Coaches
- Guides
- Listeners
- Motivators of curiosity
- Conference partners
- Background builders
- Questioners
- Monitors
- Encouragers

Think of kids as...

- Explorers
- Problem solvers
- Cognitive apprentices
- Discoverers
- Innovators
- Questioners
- Producers of knowledge
- Thinkers
- Communicators
- Collaborators

Consider:

In the beginning

- Backward design
- Compelling, rich content
- Unifying essential questions
- Driven by student questions
- Collaborative design, question development
- Authentic, real world purpose, audience
- Introduce the KNOWLEDGE PRODUCT
- Goal of deep understanding
- Rigor and challenge

Early in the Process

- Background building
- Vocabulary development
- Prior knowledge and experience
- Prior attitudes
- Student questioning
- MEANING
- Choices
- Ongoing formative assessment
- Teacher as guide, coach, facilitator
- Social interaction

Information to Knowledge Journey

- Construction of meaning
- Learning to learn, sustained dialog
- Investigation using quality resources
- Student centered - Engaged learner
- Authentic intellectual work
- Connections to text, self and world
- Skill development, improvement
- Gathering evidence, Synthesis, conclusions

VERBS	LEVEL	PRODUCTS	QUESTIONS
build, create, design, develop, devise, generate, hypothesize, invent, propose, theorize, compose, construct, invent, improve, adapt, imagine, formulate	Synthesizing	a model program to address social issue; inventing a new animal; creating a new country; designing a building, machine, process, experiment; developing legislation; devising an ethical code, a way to test a new concept or theory; creating a play, a song, a movie	What if? Why? How? Should? So what?
blend, build, combine, compile, conclude, compose, convince, decide, dramatize, express, forecast, imagine, modify, revise	Transforming	ad campaign, a board game, a poem or short story, a play, dialog, speech, role play, news show, historical newspaper, web page	What is your: conclusion? Connection? Prediction?
appraise, argue, assess, criticize, compare, debate, defend, judge, justify, rank, prioritize, refute, review, support, value, weigh, verify, recommend	Challenging	critical review, argue as an attorney, determine the worth of a project, defend a judgment, debate issues, evaluate information, investigate a problem, justify a rank	Which is better? How would you rate? Refute? What evidence Supports?
analyze, apply, associate, break down, differentiate, change, compare, contrast, distinguish, examine, infer, experiment, relate, select, map, sift, solve	Analyzing	Create a timeline or flowchart & correlate events, transplant an event or person, write an obituary or review, letter to the editor, rewrite w/ new perspective, graphic	Why do you think? What justifies? How is this related? How can you distinguish?
Cite, complete, describe, document, explain, expand, give examples, illustrate, restate, paraphrase, generalize, show, solve, use, portray	Explaining	dramatize, illustrate, present a news show, fictional diary or narrative, resume for a person researched, explorer's log, journal, guided tour	What? Who? Where? When? What is different, the same?
arrange, cluster, find, identify, label, list, locate, match, name, recall, reproduce, select, state, recount	Recalling	select or list, find facts, select pictures, state questions of a reporter, arrange words, define words, write a letter recounting, chart facts, make a timeline	Who? What? Where? When?

Planning VERBS	SAMR level	Knowledge PRODUCTS	Umbrella QUESTION starters
build, create, design, develop, devise, generate, hypothesize, invent, propose, theorize, compose, construct, invent, improve, adapt, imagine, formulate blend, build, combine, compile, conclude, compose, convince, decide, dramatize, express, forecast, imagine, modify, revise	<p style="text-align: center;">Redefine</p> <p>(Creation of a solution, idea, product to address a problem)</p>	<p>Create a program to address social issue; inventing new [animal; creating a new country]; Design a building, machine, process, experiment; Develop legislation; Devising an ethical code, Test a new concept or theory;</p> <p>Create a play, a song, a movie, an award, ad campaign, a board game, a poem or short story, a play, dialog, speech, role play, news show, historical newspaper, webpage, or other creative work.</p>	<p style="text-align: center;">What if? Why? How? Should? So what?</p>
appraise, argue, assess, criticize, compare, debate, defend, judge, justify, rank, prioritize, refute, review, support, value, weigh, verify, recommend	<p style="text-align: center;">Modify</p> <p>(Significant task redesign)</p>	Critical review, argue as an attorney, determine the worth of a project, defend a judgment, debate issues, evaluate information, investigate a problem, justify a rank	Which is better? How would you rate? refute? What evidence supports? What is your: conclusion? connection? prediction?
analyze, apply, associate, break down, differentiate, change, compare, contrast, distinguish, examine, infer, experiment, relate, select, map, sift, solve	<p style="text-align: center;">Augment</p> <p>(Tool substitution and improvement)</p>	Create a timeline or flowchart & correlate events, transplant an event or person, write an obituary or review, letter to the editor, rewrite w/new perspective, graphic	Why do you think? What justifies? How is this related? How can you distinguish?
Cite, complete, describe, document, explain, expand, give examples, illustrate, restate, paraphrase, generalize, show, solve, use, portray arrange, cluster, find, identify, label, list, locate, match, name, recall, reproduce, select, state, recount	<p style="text-align: center;">Substitute</p> <p>(Tool substitution with no change)</p>	dramatize, illustrate, present a news show, fictional diary or narrative, resume for a person researched, explorer’s log, journal, guided tour select or list, find facts, select pictures, state questions of a reporter, arrange words, define words, write a letter recounting, chart facts, make a timeline	<p style="text-align: center;">What? Who? Where? When? What is different, the same? Who? What? Where? When?</p>

Building Technology-Infused INQUIRY Learning Adventures:

Identify	Jot notes here
Content: Standards- learning objective Enduring understanding?	
Brainstorm a possible PBL Umbrella Question: Essential Question: Compelling Question How, why, what if, should, does, Include a pronoun	
<i>What can the TECHY knowledge product be?</i> build, create, design, develop, devise, generate, hypothesize, invent, propose, theorize, compose, construct, invent, improve, adapt, imagine, formulate	
TECH Tools to Use	
How will the kids SYNTHESIZE?	

