

ARTS MYSTERIES

TRD MRK

SILVERQUICKEN

*Benjamin Franklin,
Vivifier*

MAGICKS & SCIENCES

PUZZLE SAMPLER #3: NUMBERS

PUZZLES THAT AWAKEN

CURIOSITY & WONDER

Silverquicken Education offers a variety of enrichment opportunities for kids and teachers, including in-class puzzle adventures and after-school Solver's Clubs around the country. We are a group of teachers, parents, and education industry veterans with a common purpose—igniting wonder and joy in education, and building the kinds of problem-solving skills and confidence our kids need to thrive in tomorrow's world. You are well on your own way to awakening the curiosity and wonder in your students. We hope you enjoy this free puzzle sampler. To learn more about our programming, puzzles, and events, visit us at:

WWW.SILVERQUICKEN.COM

TIPS FOR LAUNCHING PUZZLES

HOLD THE HINTS – At first it will be tempting to give your students hints, however the power of these puzzles lie in the productive struggle they encourage. Provide several minutes of think time before scaffolding. Encourage peer sharing.

SCAFFOLD WITH QUESTIONS – Ask students questions like: What do you see? What does that make you wonder? Let's pretend it's true. How could you test it out?

FOCUS ON FUN – Intrinsically motivate your students to keep going by making puzzling fun. Puzzle together, puzzle often, and lean into the wonder and excitement these puzzles unleash. Don't forget to celebrate success!

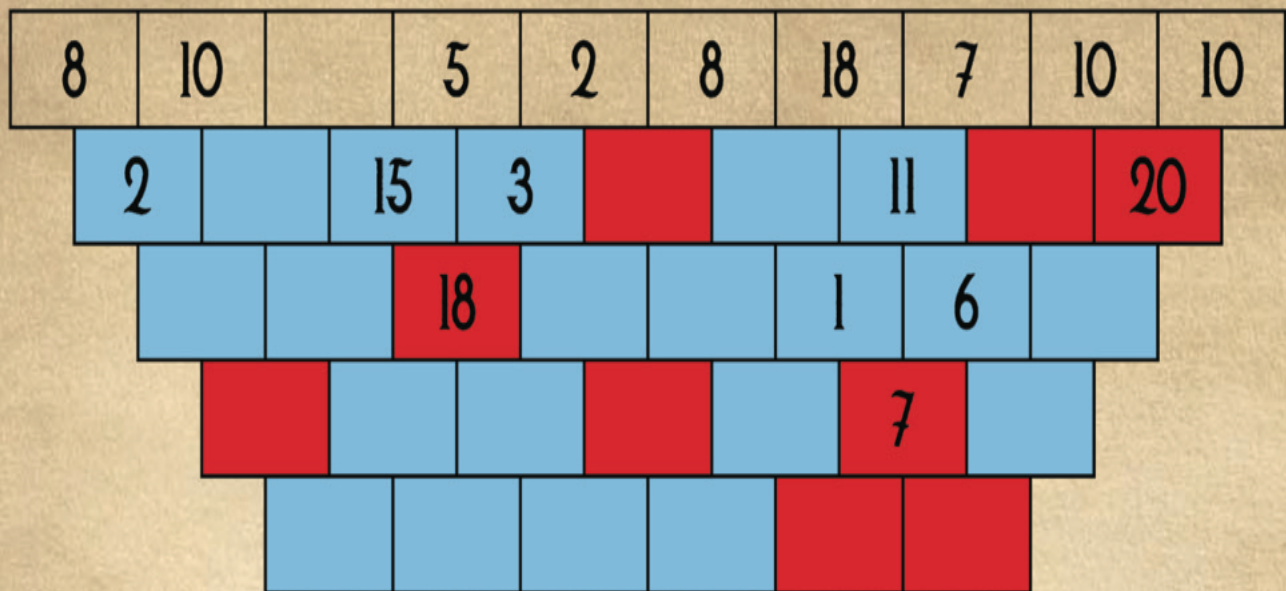
NUMBERS ARE RED, NUMBERS ARE BLUE

You're running late logging in for class at the virtual Silverquicken school. However, after you click on the icon, the following message appears. Could this be punishment for your tardiness, part of your training, or both?

THE PASSWORD YOU SEEK IS NOT OBVIOUS YET.
BUT YOU'LL FIGURE IT OUT—YOU MUST NOT START TO FRET.

BE CAREFUL, HOWEVER—YOU'RE ONLY A HERO
IF SOLVING WITH NUMBERS ALL NOT LESS THAN ZERO.

DISCOVER THE PATTERN AND THEN YOU WILL KNOW
THE DESCRIPTION OF NUMBERS ALONG THE LAST ROW!



THE PASSWORD IS “ _____ ”

NUMBERS ARE RED, NUMBERS ARE BLUE

Encourage students to make detailed observations and look for patterns. When two numbers are next to each other, you either add or subtract to get the number below them. If the number below is in a blue box you add; if it's in a red box, you subtract. Once you figure out the numbers, look at the numbers in the bottom row for the password. They're all EVEN numbers!

Scaffold the solution by asking what the numbers at the end may be telling us. If students need more hints, you could use dashes to suggest that the password is not a number but a sequence of letters.

THE PASSWORD IS "EVEN"

RAINING DIGITS

Think of each number as a set of digits rather than a whole number. Multiply the digits together to get to the next number in the chain. This is a tough pattern to spot!

Encourage students to notice the numbers are decreasing in value as you go down. The number in each box of the code is a single-digit number: the last number in the chain!

Scaffold by asking students what mathematical operations could cause this pattern. It's okay if they take some wrong turns!



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PUZZLE SAMPLER #4: WORDS

PUZZLES THAT AWAKEN

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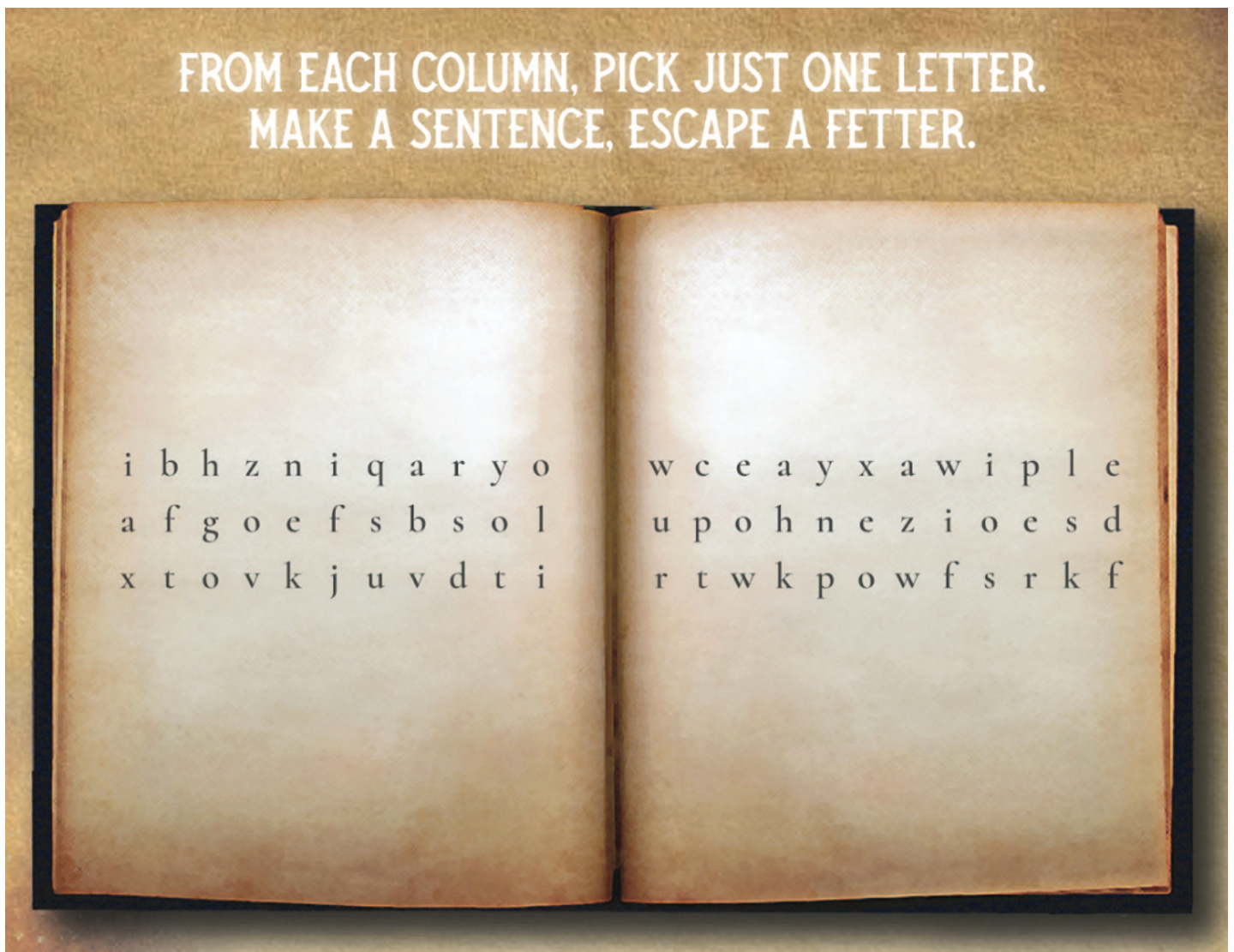
PUZZLING PAGES

Today you are joining Connor and Pree in exploring the Silverquicken Library. All of a sudden, an enormous and very old looking book on the shelf in front of you begins to glow faintly.

“Is that good or bad?” Connor asks, as the rest of you draw closer.

“Could go either way,” Pree admits. “Water Falcon to decide who gets it down?”

You win a quick round of Rock Paper Scissors Water Falcon...so you're the guinea pig. As you carefully lift it off the shelf, you realize that your hands are now stuck to the book, and the pages fly open in a burst of light. You all lean in to peer at its mysterious pages. “What could this mean?” you wonder.



SINK OR SWIM?

You and the other Silverquicken students are meeting Coach Noreaster down by the lake, and judging by the buoys you see floating in the creature-infested waters, it seems like she has really gone off the deep end this time. Can you make it to the other side of her course, before something makes you its lunch?

FIND A PATH FROM START TO END BY CONNECTING THE BUOYS.
TWO BUOYS THAT ARE CONNECTED BY A DOTTED LINE CAN BE CONNECTED ONLY IF THEY ARE SYNONYMS OR ANTONYMS OF EACH OTHER.

START END

RULE MEASURE CLEAN

CONTROL HOT NEAT CREATED

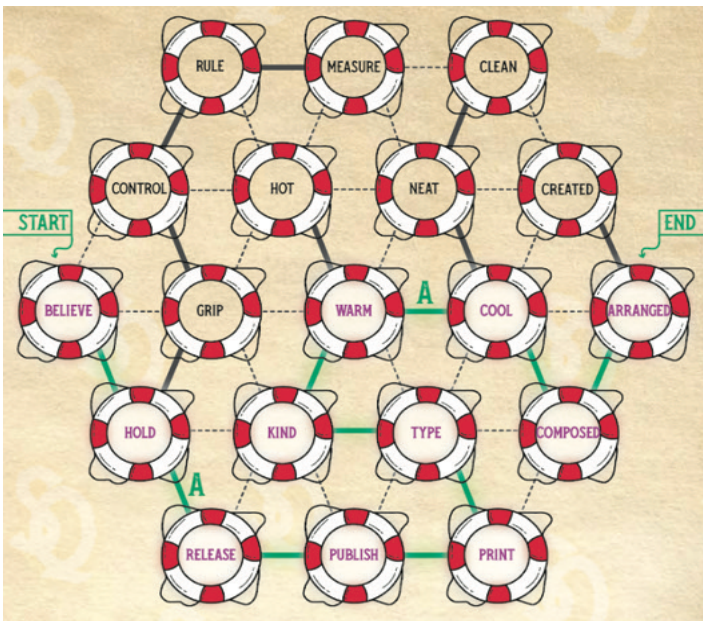
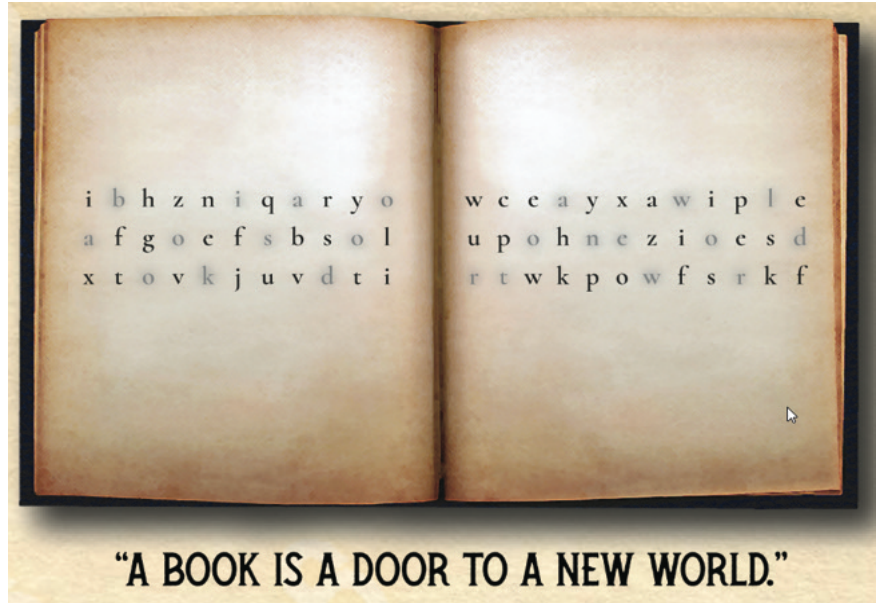
BELIEVE GRIP WARM COOL ARRANGED

HOLD KIND TYPE COMPOSED

RELEASE PUBLISH PRINT

PUZZLING PAGES

Encourage students to make observations and look for patterns. They should notice that the answer to this puzzle is a sentence, with letters provided in the 23 columns. The clue calls for the puzzler to make real words using one letter from each column. As needed, **scaffold** the solution by asking students which letter makes sense to begin with in the first column (or better yet, which letter they can eliminate). This puzzle requires a bit of trial and error at first. Students will need to keep track of several possibilities as they go. Be sure to encourage their persistence and celebrate small successes as puzzlers navigate across the columns and form words. A little teamwork goes a long way with this puzzle.



SINK OR SWIM?

Encourage students to make observations about which words in this picture relate to each other. Remind them that several may have multiple meanings! The thick green lines represent connections, with the “A” in the middle of a line indicating that the connection is an antonym, not synonym. There are some additional connections (shown in thick gray lines) that can be made, but they do not get you to where you need to go. **Scaffold** by examining the first buoy together. The declaration of independence begins, “We *hold* these truths to be self-evident...” How can examples like this help you float along?