BIG SQUARE PUZZLE

(aka "Tarsia" Puzzle)

Big Square Puzzles are located in the Reproducible sections for some *MathLinks* Student Packets and also in some Other Resource sections for specific Units (Essential Skills and Nonroutine Problems). Four examples are given in this file to help students get used to the routine (three non-mathematical). A template follows for making up puzzles of your own.

Why: Big Square Puzzles engage students as they practice skills. Students can talk about strategies and solutions in a safe environment while solving the puzzle.

Prepare ahead:

- Reproduce a Big Square Puzzle – cut up one puzzle per pair or small group (or ask students who arrive early to class or finish work early to cut up puzzle pieces).
- Paperclip pieces together so they will be ready for use.
- Have glue sticks or tape ready for students upon completion. The intact Reproducible page acts as an answer key.

Launch the activity: Use the Big Square Puzzles as a starting activity to establish routines.

- To solve a puzzle, ask students to divide up all pieces among their groups. Of the given examples, the first matches pairs of famous cartoon characters from the same movie/show/comic. For the next two, states and their capitals are matched. For the final example, students look for equivalent numerical expressions to match. In some puzzles, students will find that there may be more than one match, but there is only one way to complete each of these puzzles.
- While students are solving the puzzle, circulate and give each group a glue stick or a strip of tape to use to tape pieces together upon completion.

  Note that a few units have these puzzles in triangle form (Big Triangle Puzzles), but the activity works the same.

Accountability/Follow-up Ideas:

- Ask students to show a completed puzzle as an "exit slip."
- Ask students to tape a completed puzzle together. Use puzzles as room displays.
- Give extra credit to groups that complete a puzzle correctly.
- Ask students to create their own puzzles for others to assemble using a paper template or online software. One possibility is: https://download.cnet.com/Formulator-Tarsia/3000-2051_4-10584458.html

BIG SQUARE PUZZLE: CARTOON CHARACTERS

Cut apart and reassemble. Use this page as an answer key.

Butt – Head Fred Flinstone	Larry the Cucumber Barney Rubble Bugs Bunny	Wile E. Coyote Daffy Duck Homer	Mickey Mouse Bart
Candy Cat Rocky Beavis	Tommy Pickles Bullwinkle Bob the Tomato Winnie the Pooh	Ferb Tigger Roadrunner Raphael	Charlie Brown Leonardo Donald Duck
Tweety Shaggy Peppa Pig	Yogi Bear Scooby Doo Chuck Finster Jerry Mouse	Olive Oyl Tom Cat Phineas Kenny	Batman Cartman Snoopy
Ursula Sylvester	Ariel Boo Boo Buzz Lighyear	Woody Popeye Squidward	SpongeBob Robin

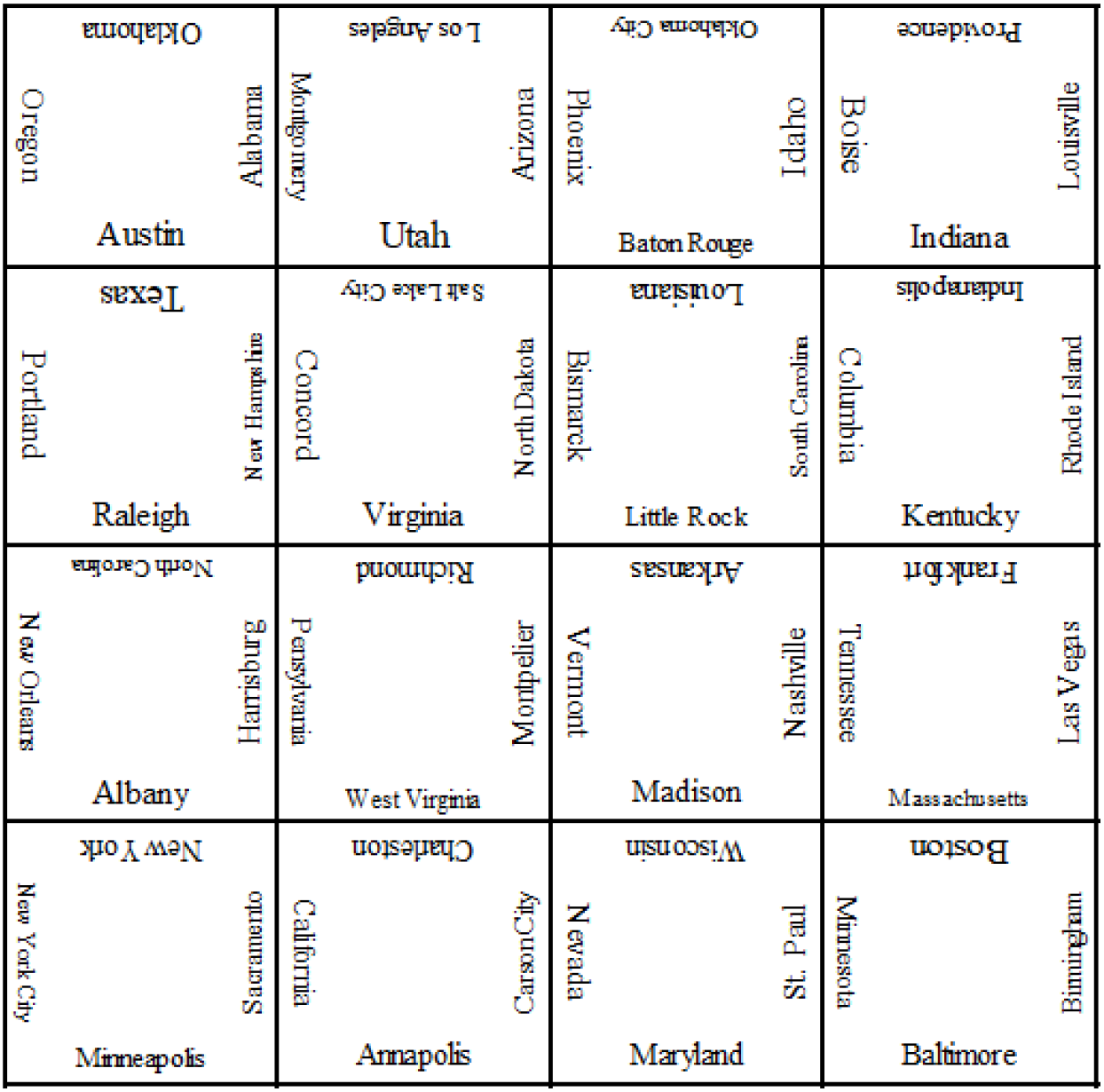
BIG SQUARE PUZZLE: STATES AND CAPITALS 1

Cut apart and reassemble. Use this page as an answer key.

California Olympia	Florida Wyoming	Illinois Denver	Springfield Kansas
Delaware Pierre	Maine Alaska	Georgia Des Moines	Atlanta Missouri
Trenton Salem	Helena Connecticut	Jackson Honolulu	Mississippi Michigan
Columbus Oregon	Santa Fe Ohio	Lincoln New Mexico	Nebraska Lansing

BIG SQUARE PUZZLE: STATES AND CAPITALS 2

Cut apart and reassemble. Use this page as an answer key.



BIG SQUARE PUZZLE: NUMERICAL EXPRESSIONS

Cut apart and reassemble. Use this page as an answer key.

$10(2)$	$(4)(3)(2)(1)$	1^{100}	$6-2+3$
243	5^3	2^3+3^2	54
30	$6-3+9-4(3)$	$\frac{64}{4}$	$4+3(7)$
$\frac{1}{2}+\frac{1}{4}$	$\frac{3}{4}$	$\frac{15}{105}$	$\frac{3}{12}$
20	24	1	7
$9(150-143)$	$\frac{(2)(4)(6)}{(6)(8)(10)}$	$\frac{8}{(4)(2)}+1$	$\frac{3-1}{3+3}$
100	0	16	25
$2+4+6+8+10$	30	$\frac{1}{10}$	34
$5+5^2$	$7(9)$	2	$\frac{1}{\frac{1}{3}+\frac{1}{1}}$
$12-2(2)$	$3(7+4)$	$\frac{2}{3}$	33
$(5+5)^2$	8	$25-5^2+34$	$\frac{1}{3}$

BIG SQUARE PUZZLE: _____
