Can You See What I See? Activity Guide

Can You See What I See?
by Walter Wick

About the Book
Can You See What I See? is a delightful picture book filled with a mesmerizing collection of mazes, illusions and twelve search-and-find puzzles designed by award winning author and photographer Walter Wick. You know...the *I Spy* guy!

What does Walter Wick know that I should know? Well, for starters...how to capture the imagination of everyone who picks up one of his amazing books! *Can You See What I See?* is the latest addition to his collection of I-can't-put-this-down-until-I-solve-the-puzzle books we love to see in the hands of our students. The compelling photographs provide perfect opportunities to introduce and discuss high-interest subjects like mazes and labyrinths...right angles...mirror images ...and kaleidoscopes. And they provide wonderfully inspirational story starters for creative writing projects that your students will love!

Can You See What I See? is the foundation for each one of the social studies, science, art and writing lessons you'll find here. And although these lessons were designed for third through fifth graders...you'll find that they can be easily adapted to any grade level curriculum.

Leave a copy in your reading corner and in no time at all you'll hear your students whispering... "can you see what I see?"
Science
Cool classroom kaleidoscopes!

In 1816 Sir David Brewster of Scotland was the first person to invent a kaleidoscope. He stumbled upon it while experimenting with prisms and other optical tools. He created a tube-like instrument with loose pieces of glass and other objects that were reflected by mirrors set at different angles, which created symmetrical patterns when viewed through one end of the tube. Kaleidoscope comes from the Greek words kalos (beautiful), eidos (form) and scopos (watcher). A kaleidoscope is a beautiful form watcher!

Talk about the beautiful crystal images in "See Through" on page 16. What comes to mind? A kaleidoscope! Pass out mirrors (you know...the little plastic ones in your math kits) and have students hold them up to the images on these two pages. Are the reflections symmetrical? How many images do they see? Does the number of images change if three mirrors are used? Ask students to offer their theories/explanations and make a list of their ideas on the board.

Here's a recipe for a simple, easy and very inexpensive kaleidoscope for every student in your room. Lynn Mitchell designed it.

*Film Canister Kaleidoscopes**

For each kaleidoscope you will need: 2 black plastic film canisters (toss the gray lids!), 3 standard plastic microscope slides, 1 small plastic petrie dish and 7-8 transparent, colored pony beads. Other materials needed: a small hammer, a penny nail, scissors and a hot glue gun. Under your watchful eye, your students can make these themselves!

Step 1. Pound a hole in the end of one film canister with a hammer and a penny nail. This will be your eyehole.

Step 2. Cut out the dime-sized indentation in the end of the other film canister with sharp scissors. This will be the end to which you glue your bead container.

Step 3. You'll want to help with this.... *carefully* insert all 3 plastic microscope slides into the film canister with the penny nail-hole so that they form a triangle. They'll stick way out of the film canister but that doesn't matter and you'll see why.

Step 4. You'll want to help with this step too...put 7-8 pony beads into the petrie dish and run a tiny bead of hot glue along the edge of the dish. Quickly put the lid on to seal the little beads inside the container.

Step 5. Run a bead of hot glue onto the end of the film canister with the dime-sized hole and quickly center it onto the flat bottom of the bead-filled petrie dish.

Step 6. Now, carefully fit the two film canisters together over the microscope slides and...you've made a kaleidoscope!

Hold your kaleidoscope up to the light and slowly rotating it, look through the penny-nail hole. Can you see what I see?

*Ask your local one-hour photo store to save film canisters for you.

A decidedly different domino race!

Look at "Domino Effect" on page 20. Ask your students to carefully examine the arrangement of the dominos. Can they predict what will happen if just one domino falls over? Discuss cause and effect. What is a chain reaction? Center of gravity? Together, decide where the starting point of this domino race is and where the end might be. How do your students know they're correct? Brainstorm a list of concepts and vocabulary words on chart paper.

Now...divide the class into two teams and give them what will arguably be your most popular assignment all year...design a domino race that ends with a happy twist...the winner is the team with the last domino to fall. In other words...to quote the tortoise..."the

slower, the better!" Your students will have to think...and think hard about how to slow down their domino chain reaction. Create a list of necessary supplies and remember that teams need to have exactly the same objects...same number of dominoes (check out the local thrift store), same number of wooden building blocks (borrow a boxful from your local kindergarten teacher), same components for the switch (an incline plane using a ruler, wooden blocks and a marble)....

On the day of the big race, consider inviting other classrooms...
perhaps parents and your principal. Some strategic planning...a little practice time and you and your students are off to the races. I bet I know what you'll be hearing from excited students...can you see what I see?

Social Studies and Art

Magical, mystical mazes!

Using "String Game" on page 11 or "Bump, Bump, Bump" on page 28 as examples, talk to your students about mazes. People have been fascinated with mazes and labyrinths for hundreds of years. In his second book, Herodotus described the Great Labyrinth of Egypt which was built by the Egyptians as a memorial to themselves. Early Romans designed topiary mazes as game courts and some of the ancient turf mazes found across Europe were once believed to have been "cut for penitential purposes by ecclesiastics." Today meditation mazes are beginning to appear in hospital gardens and prayer labyrinths are once more included in the designs of reflection gardens around local churches. For more information, consult *Mazes & Labyrinths: Their History and Development* . W.H. Matthews, Dover Publications, Inc. New York.

Why were mazes once so important in society? What were their early uses and why are they so rare today? Challenge your students to find out more about mazes and labyrinths....at the library or on the Internet. Make a KWL chart (What We Know, What We Want to Know, What We Learned). When students have discovered a fact about mazes or labyrinths, give them a bright-colored Post-It note and they can post their information on the chart for extra-credit!

Ask students to design an original maze on graph paper. What is the function of their maze? Meditation? A game to play with friends? Remind them that a good maze has only *one solution* ! After they have finished their graph paper maze...have students transfer their design onto larger, decorated paper using their media of choice. A medium white filing folder label in the corner of their paper can hold a brief description of their maze and its function. Display the mazes in your school library. Can you see what I see?

Fascinating, found objects!

Ask students to choose a favorite picture from the book. What makes it special to them? Discuss some of the elements of the design. What is the role of color and shape in the picture? What objects were used? Can they find and identify a theme in the picture?

Offer students the challenge of creating an original picture out of found objects from

home. Together compose a letter to families asking for their help gathering little odds and ends to be used in the creation of individual student work based on the pictures in this book. Look in junk drawers, in between couch cushions and underneath beds. Make a list of things that students might bring from home...used postage stamps, little glass or plastic beads, pennies, string/yarn/ribbon, tiny plastic toys, old buttons, little wax birthday candles, dice, plastic cubes, scraps of fabric, old action figures or dollhouse furniture...

Give each student a little brown paper bag to keep treasures in. When students have gathered sufficient items, let them arrange everything on an 11x17" sheet of bright colored oaktag and when they are satisfied with their design, they can glue on their items with white school glue. Read the titles of each of the pictures in Can You See What I See outloud to the class. Ask students to decide on a title for their own picture and write it on the back. Gather your students together to look at the finished pictures. Can students guess the original title of each picture? After pondering the pictures and their suggested titles, ask each illustrator to read her original title outloud. Are there similarities between the suggested and original titles? Can you see what I see?

Writing
Tall tales to tell!

This book lends itself exceptionally well to creative writing projects! Look carefully at the pictures with your students and suggest story prompts. For example, look together at the "Magic Mirror" on page 23. Can your students create a fable that will explain those para-normal peculiarities between the images in the mirror and the photograph itself? "Assembly Required" on page 27 offers your class a perfect opportunity to concoct a collection of short stories about the robot and that little mouse in the corner. Could this robot be the ultimate mousetrap? And if he is...who is the inventor of this cunning contraption? "Bump, Bump, Bump" on page 28 could provide the catalyst for a story about the adventures of the little egg truck as it wanders through the theme park on its way to...well, wherever it might be going. And of course, "Wood Shop" on page 19 might motivate students to write about the secret lives of the little wooden animals after the woodcarver has gone home for the day. Can you see what I see?

Clever codes to crack!

Children of all ages love secret codes and will cheerfully write lengthy encoded paragraphs for their delighted teachers. Use the letters in "Alphabet Maze" on page 31 and a small mirror to captivate your students with a clever secret code that uses the reflection symmetry of capital letters. Demonstrate this concept for students by placing the edge of the mirror across either the vertical (or sometimes horizontal) center of a letter and they can see that the reflected image in the mirror completes the letter. Student simply erase the mirror half of each letter to create a secret code which their classmates can only decipher using a mirror. Tape a small manila envelope to the side of each student desk. Set aside 15 minutes two or three times each week for students to write coded messages to each other which can be stored in the manila envelopes. Be sure to establish guidelines for the messages...positive notes only...no inappropriate

language...and every student must be the recipient of at least two notes each week. You'll have secret messages flying from desk to desk! Can you see what I see?

Mathematics
Circles and angles and cubes...oh my!

Give pairs of students a copy of the book and ask them to locate examples of geometric shapes.... spheres, right triangles and cubes...look for parallel and perpendicular lines...acute and obtuse angles. You and your students can find wonderful examples of many different geometric shapes and ideas on every page. Can students locate multiple examples of obtuse and right angles in "Card Tricks" on page 15? Congruent shapes and perpendicular lines in "Picture Blocks" on page 24? Cones, cylinders, isosceles triangles and pyramids in "Bump, Bump, Bump" on page 28? Working with partners, ask students to generate lists of geometry questions based on the pictures in the book. These student pages can be laminated and slipped between the book pages for your "early finishers" to use when they find themselves with a few moments to spare. Can you see what I see?