

Primarily Thinking

Thinking Skills Activities for Primary Grades

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This series of thinking-skills-based activities can be used with primary-grade students in a whole-class heterogeneous setting, with small groups, as part of a gifted identification process, and/or with gifted-identified groups.

For about twenty years, these activities have been used as the beginning of the screening and identification process for our gifted program in Polson, Montana, starting the first month of Kindergarten each year. The included activities, materials, suggestions, and recommended resources can assist you in infusing thinking skills into your primary classroom or in using thinking skills as a way to begin identification for gifted services.

Approximate suggested order of activities:

- | | |
|----------------------------|--|
| 1. Club Game | (Flexible Thinking) |
| 2. Clues #1 | (Analytical, Logical, and Analogical Thinking) |
| 3. What Could It Be? | (Creative Thinking) |
| 4. Different and the Same | (Analytical and Analogical Thinking) |
| 5. Shape Pictures | (Creative, Flexible, Strategic, and Analytical Thinking) |
| 6. Attribute Blocks | (Logical and Analytical Thinking) |
| 7. New Zoo | (Creative, Flexible, and Analogical Thinking) |
| 8. Logic Puzzles #1 (3x3) | (Logical Thinking) |
| 9. Letter Pictures | (Creative and Flexible Thinking) |
| 10. Cut & Fold | (Strategic, Flexible, and Analytical Thinking) |
| 11. Logic Puzzles #2 (4x4) | (Logical Thinking) |
| 12. Analogies #1 (solve) | (Analogical and Analytical Thinking) |
| 13. Analogies #2 (create) | (Analogical and Creative Thinking) |
| 14. Clues #2 | (Analytical and Flexible Thinking) |

What to look for if using these activities as part of a gifted identification process:

- * Students who can generate multiple ideas
- * Students who generate highly unusual (original) ideas
- * Students who can generate a variety of ideas (not all focused in the same area)
- * Students who elaborate and provide lots of detail (whether visual and/or verbal)
- * Students who can do any or all of the above with mostly-consistent regularity
- * Students who show or consider alternative perspectives
- * Students who react with giddy enthusiasm to all or most of these activities
- * Students who use language and vocabulary that is advanced for their age
- * Students who explore and demonstrate knowledge of topics not common for their age
- * Students who “take off” after approximately half of the lessons (typically these are the bright kids who come from backgrounds with little or no exposure to opportunities)
- * Students who notice that which the others have no awareness of
- * Students who devote significant effort and detail to a smaller number of ideas

For most of the following activities, it's a good idea to use these important guidelines:

- * Always encourage more than one idea: "If you have more than one idea, you can certainly show me however many ideas you have."
- * Stress originality: "Whose ideas go on your paper? YOUR ideas. The examples I gave on the rug are MY ideas. Use your own ideas." (For on-paper activities it is best to just not give any visual examples. Don't walk in their heads with your dirty feet.)
- * Stress the importance of good hard work and good hard thinking... that it's not about who's done first or who does the most, it's about thinking hard and working hard.
- * If you give them steps to go through (such as, "first write your name on your paper"), include "THINK" as one of the steps to help them gain recognition of and focus on the thinking processes that happen in their heads.

1. The Club Game

Approximate time: 20 minutes

Have students generate ideas of things that could belong to the following categories, or "Clubs." Feel free, of course, to create your own Club ideas.

- | | |
|---|---------------------------------|
| * things in school that are round | * things outside that are round |
| * things you would eat for breakfast | * things with wheels |
| * things that fly that aren't birds | * things that are quiet |
| * things they've learned so far in school | * things that use electricity |
| * ways to show you care about someone | * ways to get to school |

2. Clues #1

Approximate time: 20 to 30 minutes

Share a few clue puzzles with the kids and have them guess the answers. ("I am red, round, grow on a tree, and I have only one seed inside of me." Answer: a cherry or plum. "I am orange and round and grow on the ground." Answer: a pumpkin. Etc.) Have the students draw their own picture and create a clue and answer for it. Some students will need help generating clues. A question like, "Tell me what you know about _____," can help to elicit information that the student can turn into a clue. Use the included page for student responses. Write their clues and answers for them using their exact language.

3. What Could It Be?

Approximate time: 20 to 30 minutes

The task for students on this activity is to turn each shape/line into a picture of something. The shapes or lines will become part of their picture, but the rest is missing and students have to add (draw) the missing portions of their idea(s). You can use the enclosed three prompts or create your own. (This activity is a take-off of a portion of the Torrance Test of Creative Thinking, or TTCT, which you can google for further ideas.) Write for them what they created using their exact language.

4. Different and the Same

Approximate time: 25-30 minutes

Begin by sharing examples of pairs of items that have similarities and differences, such as a stapler and a roll of tape, a pencil and a pen, an index card and a sticky note. Talk about “same” and “different” and what they mean. Ask students for their ideas of what is the same and what is different about each pair of items. (The similarities are usually harder for them to come up with.) Then have the students share their own ideas on the included paper. Write for them what they drew and how those items are different and the same (once again using their exact language).

5. Shape Pictures

Approximate time: 30 minutes

Each table or group of students gets a few handfuls of plastic (or wooden or foam) shapes to share. Each student decides what he or she wants to draw or create and then has to figure out how to use any or all of the shapes to trace around to make that picture. (Houses, people, and bears are very common responses to this activity. Look for the unusual, as well as the detailed.) Write for them what they created using their exact language.

6. Attribute Blocks

Approximate time: 25 to 30 minutes

Place the triangles, squares, and circles from a set of attribute blocks into an opaque container (36 total pieces). Remove three pieces that together represent the three different shapes, the three different colors, the two different sizes, and the two different thicknesses. Talk with the kids about how each piece has four “parts” or characteristics to it: “big, thick, yellow, triangle,” “small, thin, blue, square,” “big, thin, red, circle.” Lay those three pieces out where everyone can see them. Then tell the kids that their challenge for the day is to figure out what other pieces are in the bucket without even being able to see them. Each piece is somehow different, yet somehow the same, as some of the others. Once two or three kids go, they get the hang of it. “Is there a small, thin, red, circle?” Group all the pieces together in some sort of pattern as they emerge from the bucket, which helps the students to figure out what to ask for that’s still in the container.

7. New Zoo

Approximate time: 25 to 30 minutes

Today’s challenge is to create brand new, “pretends” animals for a “New Zoo.” Students will combine parts or characteristics from two or more animals (or insects) to create a new animal that can now do something it couldn’t do before. The “Snakeocerous,” for example, could dig a hole with its horn or defend itself with its horn. In addition to drawing their idea, students also generate a name for their new animal as well as tell something that is special about their new animal (such as what it can do). Use the enclosed page for student responses. Write on the papers for them using their exact language.

8. Logic Puzzles #1 (3x3)

Approximate time: 30 to 35 min. for 3 or 4 puzzles

Logic Puzzles use a grid system and a series of clues (with a background story) to solve a problem. Create a 3x3 grid by drawing it on the whiteboard or by using tagboard. All “yes” matches are marked with an “O,” and all “No” matches are marked with an “X.” It’s a good idea to set up the match items so that the final answer does not come out with all three O’s in a diagonal (otherwise the kids get it confused with tic-tac-toe). Use any of the logic books listed on the Resources page to get the clues for a puzzle. (I often change details, like locations, to make them relevant for the kids.) Read the clues and have kids come up to the board to place the X’s and O’s. Once the problem is solved, note the answers (matches). Example:

	♥	♪	☀
M	O	X	X
J	X	X	O
K	X	O	X

9. Letter Pictures

Approximate time: 25 to 35 minutes

Provide the students with pages that have letters drawn on them, some capital and some lowercase. The challenge is for them to turn each letter into a picture of something, using the line of the letter as part of each picture and adding whatever is missing. Students interested in an extra challenge could (optionally – their choice) turn each letter into something that starts with that letter. Letters on the same page could also be combined to create larger pictures. Write for them what they created out of each letter using their own exact language.

10. Cut & Fold

Approximate time: 30 to 40 minutes

Use page 107 from the Smart Snips book (or the enclosed copy). [I (or a teacher’s aide) chop them all up into little packets ahead of time (with each of the six problems pre-cut on the dotted lines and clipped together with a large paper clip) in order to save time while with the kids (since I have limited time with each class), but this isn’t necessary if you’re with your own class.] This activity really highlights the kids with great spatial skills, and often a kid or two will shine on this one who hasn’t previously shone on the other activities. This activity will also highlight the perfectionists (because they struggle to get each fold “just right”) as well as those with great problem-solving skills and work ethic. I draw “before and after” pictures on the white board so they have some idea of what the final products should look like. I also encourage them to save #1 and #3 for last as those are the hardest to solve since they utilize angle folds. The kids cut on the solid lines and then have to figure out how to fold each item in order to turn it into what it’s supposed to be. Often a good idea to let them know that it’s okay if they don’t solve them all. These are quite difficult!

11. Logic Puzzles #2

Approximate time: 30 to 40 min. for 3 or 4 puzzles

For the second series of logic puzzles, use a 4x4 grid.

12. Analogies #1

Approximate time: 30 minutes

Use page 32 from the First Time Analogies book. The pieces they will need to cut out to solve them are at the top of page 34. (A copy of each is also enclosed.) First do a whole-class lesson on analogies. Explain that they are a special kind of pattern or relationship. “Cat is to meow as dog is to ___.” Draw some picture analogies for examples, such as “empty circle, filled in circle, empty square, ___” or “up arrow, down arrow, up tree, ___” and have the kids tell you what is missing. Use stripes/no stripes, up/down, left/right, empty/filled, number/that # of things, letter/something that starts with that letter, animal/what it eats, big/small, color/another color, etc. as pattern relationships. Then give the kids time to cut and glue what they think are the answers for the paper.

13. Analogies #2

Approximate time: 30 minutes

Review some picture analogy examples with the kids and then give them the blank “Analogies Created By _____” page where they can draw ideas of their own analogies. Offer them suggestions of the patterns mentioned in #12 above (empty/filled in, up/down, left/right, etc.) for ideas, too. Not all kids will have enough ideas to fill both sides of the page.

14. Clues #2

Approximate time: 30 minutes

Use page 253 (or any other of your choice) from the Are They Thinking? book. I change the letters under the pictures into capital letters so the students don’t get confused about which number to focus on. You can use a similar second page (one is also enclosed), too. I read each problem aloud for the kids. Have the kids put their finger on the number of the problem to help them keep the order straight. They then write the letter of the picture they think matches on the line after. “Which pictures looks most like _____?”

Suggested Resources

Analogies for Beginners, available from Prufrock Press at 1-800-998-2208 or www.prufrock.com

Are They Thinking? A Thinking Skills Program for the Elementary Grades, available from Tin Man Press at 1-800-676-0459 or www.tinmanpress.com

Brain Stations: A Center Approach to Thinking Skills, available from Tin Man Press at 1-800-676-0459 or www.tinmanpress.com

Brain Teasers, a compilation of multiple thinking-skills-based and problem-solving activities, available for various grade levels and on various topics from Teacher Created Materials at 1-888-343-4335 or www.teachercreated.com

Connections: Activities for Deductive Thinking, logic puzzles, available from Prufrock Press at 1-800-998-2208 or www.prufrock.com

First Time Analogies, available from Prufrock Press at 1-800-998-2208 or www.prufrock.com

Logic Safari, available from Prufrock Press at 1-800-998-2208 or www.prufrock.com

Logix I, a logical thinking game for kids ages 4 and up, available from Fox Imaging at 1-800-397-4156 or www.foximaging.com (A harder version, **Logix II**, is also available.)

Lollipop Logic: Critical Thinking Activities, available from Prufrock Press at 1-800-998-2208 or www.prufrock.com

Meta-Forms, a logical thinking game for kids ages 4 and up, available from Fox Imaging at 1-800-397-4156 or www.foximaging.com

Primarily Logic, available from Prufrock Press at 1-800-998-2208 or www.prufrock.com

Primary Education Thinking Skills, or “P.E.T.S.” a series of four books with thinking-skills-based activities for primary grades. Available from Pieces of Learning at 1-800-729-5137 or www.piecesoflearning.com

Rush Hour Jr., a strategic puzzle for kids ages 4-7, available from ThinkFun at (703) 549-4999 or www.thinkfun.com (Harder versions are also available, such as **Rush Hour**, **Safari Rush Hour**, and **Railroad Rush Hour**. You can also get it as an iPhone/iPad/iTouch app!) [*ThinkFun also offers “Brain Labs” and “Game Club Sets” which are classroom sets of their thinking games!*]

Smart Snips: Hands-On Thinking Adventures, available from Tin Man Press at 1-800-676-0459 or www.tinmanpress.com

Teaching Young Gifted Children in the Regular Classroom, a guide with differentiation strategies, available from Free Spirit Publishing at 1-800-735-7323 or www.freespirit.com