

Color Lines Puzzle

Thank you for downloading the science and mathematics activity packet! Below you will find a list of contents with a brief description of each of the items. This activity packet contains all the information (including any handouts) you will need to run this activity in your own classroom or at a science festival.

Please note: some activities might require the need for a facilitator to be present to oversee the activity. Activities that require a facilitator will be clearly noted.

-Community Resources for Science



Color Lines Puzzle

ACTIVITY PACKET CONTENTS

1. Organizer Instructions for the person running the activity
 - Print suggestion: 1 for the facilitator
 - Includes information for setup prior to the event (e.g., materials prep)
2. Participant Instructions (tabletop sign/printout)
 - Print suggestion: 1-2 to put in a plastic sign holder



Color Lines Puzzle

ORGANIZER INSTRUCTIONS

Grade(s): K-3

Standard connections:

- **CCSS.Math.Practice.MP1** Make sense of problems and persevere in solving them
- **CCSS.Math.Practice.MP2** Reason abstractly and quantitatively
- **CCSS.Math.Practice.MP5** Use appropriate tools strategically

Next Generation Science Standards: Science and Engineering Practices

- **Constructing Explanations and Designing Solutions** Use evidence (e.g., measurements, observations, patterns) to construct or support an explanation or design a solution to a problem

Objective: Solve ordinal word problems

Activity overview and background: Student-directed, independent activity. Students solve a series of ordinal word problems by arranging colored objects. One handout is for grades K-1 and another handout is for grades 1-3. However, students can attempt more challenging problems if they are capable.

Materials:

- One red, one yellow, one blue, and one green (grades 1-3) object per student
- Pencil (to record answers)
- Handout with directions

Setup:

1. Give each student a handout, a pencil, and colored objects
2. Grades K-1 start with 3 objects
3. Grades 1-3 can start with 4 objects

Directions:

1. Take one red, one blue, one yellow, and one green (depending on grade level) object, e.g. crayons, cube, etc.
2. Arrange the objects according to the various directions on the handout
 - Example:
Yellow is on the bottom,
Blue is in the middle,
Where is red?



Color Lines of Three

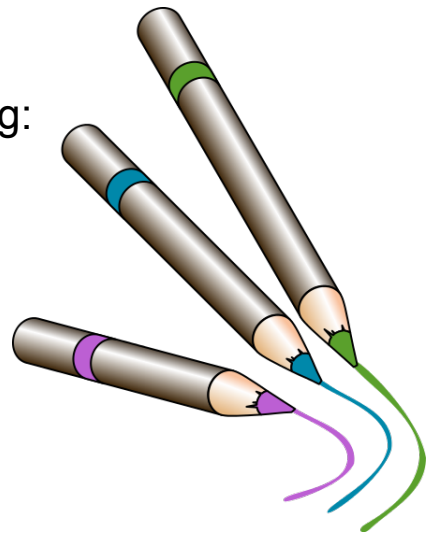
(Grades K-1)

Arrange each color line with red, blue, and yellow.

1. Red is in back of the blue.
Blue is in between yellow and red.
Where is yellow?
2. Yellow is on the bottom.
Blue is in the middle.
Where is red?
3. Blue is to the right of yellow.
Red is to the right of blue.
Where is yellow?
4. Yellow is in front of blue.
Red is behind blue.
Where is blue?
5. Yellow is on top.
Red is between blue and yellow.
Where is blue?

Make up new problems of your own! Try using:

- Beside
- Right next to
- Near but not touching
- Over (or under)

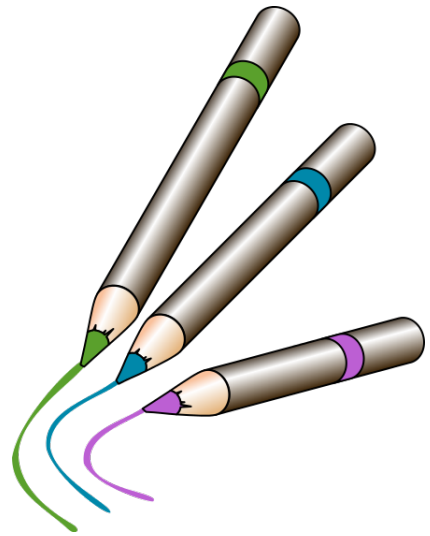


Color Lines of Four

(Grade 1-3)

Arrange each color line with red, blue, yellow, and green.

1. Blue is behind red.
Yellow is in the very front.
Red is between blue and green.
2. Red is right of yellow.
Yellow is right of blue.
Green is right of red.
3. Red is left of blue.
Green is right of yellow.
Blue is left of yellow.
4. Green is north of all others.
Red is south of all others.
Yellow is south of blue.
5. Blue is east of red.
Green is west of red.
Yellow is east of green.



Some problems may have more than one solution. Make up new problems of your own!

Can you make up one that use north, south, east, west?