

# Descriptions of Science Anchor Formats



Sample science anchor tasks on the MCPS website are in various formats including the ones listed below.

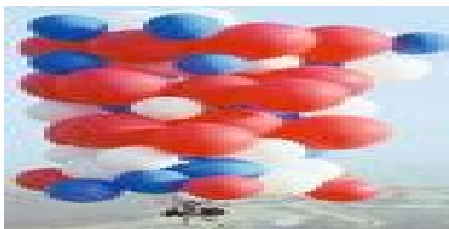
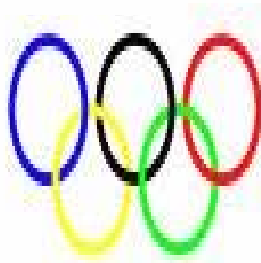
## Placemat Format:

Provides an opportunity for students to analyze a set of pictures to determine how they are connected. Example:



## Placemat B Anchor Task 2

What connects all of these pictures?  
What pictures would you add?  
Write a letter to the teacher to explain your thinking.



## RAFT Format:

RAFT is an acronym for Role, Audience, Format, and Topic. In a RAFT students take on a particular role, develop a product for a specified audience in a particular format and on a topic that gets right at the heart of what matters most in a particular segment of study. At some points, a teacher may want to assign students particular RAFTs and at other points may want the student to make the choice. RAFTs offer teachers great flexibility to plan for student readiness, interest, and learning profile.

For more information: Billmeyer, R. and Barton, M. (1998). *Teaching reading in the content areas, If not me then who?* Aurora, CO: McRel.

### Sample RAFT Assignments




MCPS Unit	Role	Audience	Format	Topic
Electricity and Magnetism	Magnet	First Graders	Diary Entry	Here's what I'm attracted to...
Introductory Chemistry	Carbon Atom	Hydrogen Atom	Personal Ad	Atom Seeking Atom
Structure and Function of Living Things	Young Chromosome	Old Chromosome	Children's Book	What becomes of us in mitosis?
	P Waves	S Waves	Letter	Why we have to stop seeing each other

### Tic-Tac-Toe Format:

Enables teachers to structure assignment options and gives students choices. For example, if we want all students to write a persuasive letter about the endangered status of the gray wolf. We would put that task in the center of the tic-tac-toe board. Refer to example below. If we wanted our on grade level students to compare the parts of a cell to a school we would put that in a box with a solid/blue rectangle. If we wanted our above grade level students to compare the parts of a cell to a city we would put that task in a box with a dotted/red rectangle.

### Structure and Function Tic-Tac-Toe Board

Complete the 3 squares that match the color or type you were assigned. You may pick any additional two squares on the board to complete.

<p>Task 1 Tour de School</p> 	<p>Task 2 Student Choice</p>	<p>Task 3 Tour de City</p> 
<p>Task 6 Student Choice</p>	<p>Task 5 All Students Endangered?</p> 	<p>Task 6 Student Choice</p>
<p>Task 7 Above-Level Students</p>	<p>Task 8 Student Choice</p>	<p>Task 9 On-level Students</p>

## Tiered Format:

Multiple levels of a task are provided. All levels are based on essential understandings and skills. High-level thinking is promoted at each level. All students are appropriately challenged. Example:

### On Grade Level:

#### *Tour de School*

**Instructions:** You are about to take a tour, either real or imagined, around your school. You will pass through parts of the school that are familiar, yet you must think of them in new ways. You are going to develop analogies, or comparisons, to the parts of your school and the parts of a cell. For instance, think of something that you are familiar with, like a refrigerator. Your refrigerator has many parts, some that you see and some that you can not. Now, think of a cell. You have seen some cell parts, and some have remained unseen. You also know that certain cell parts have certain functions. The mitochondria are the powerhouse of the cell. Your refrigerator has a powerhouse as well. It is the motor that helps to keep your food cold.

Now you will go out into the school to try to compare school parts to cell parts.

### Above Grade Level:

#### *Tour de City*

**Instructions:** You are about to take a tour, either real or imagined, around your city. You will pass through parts of the city that are familiar, yet you must think of them in new ways. You are going to develop analogies, or comparisons, to the parts of your city and the parts of a cell. For instance, think of something that you are familiar with in a city, like city hall. City hall is where city policies and regulations are passed. It is like the control center for the city. Now, think of a cell. You have seen some cell parts, and some remain unseen. You also know that certain cell parts have certain functions. The nucleus is the control center of the cell. City hall is the control center for your city.

Now you will go out into your city to try to compare city parts to cell parts.

### Possible Student Responses

<i>Tour de School</i>		<i>Tour de City</i>	
Cell Part	School Part	Cell Part	City Part
nucleus	office	lysosome	waste disposal plant
cell wall	fences	mitochondria	power plant
cell membrane	walls	endoplasmic reticulum	transportation system
vacuoles	classrooms	chloroplast	food production factory
cytoplasm	air in building	nucleus	city hall
chloroplast	cafeteria	golgi bodies	post office
		cytoplasm	open space (land/air)
		ribosomes	human work force

\*All student responses with proper justification should be accepted.