Proportion Playground Paint Splat Activity Sheet

Learning Goals

- Students will be able to create equivalent ratios.
- Students will be able to compare unequal ratios in a real-world context involving concentration levels.

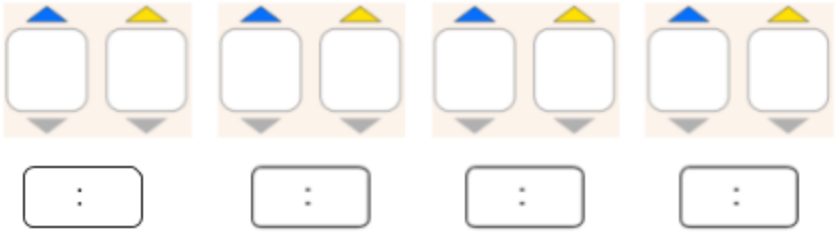
PART A: EXPLORE

1) Create your favorite shade of green.

Ratio of blue to yellow:

_____ : _____

2) How many different ways can you create your favorite shade of green?



_____ : _____ _____ : _____ _____ : _____ _____ : _____

3) What do you notice about the ratios from #2?

STOP Discuss your answer for #3 with a partner before you move on.

PART B: PREDICT

**** Make sure you have switched to the PREDICT section of the sim and are using the black and white paint. ****

4) BEFORE you use the sim, make a prediction. Then use the sim to fill out the actual column.

	PREDICTION: _____ left is darker _____ right is darker _____ both are the same shade.	ACTUAL: _____ left is darker _____ right is darker _____ both are the same shade.
	PREDICTION: _____ left is darker _____ right is darker _____ both are the same shade.	ACTUAL: _____ left is darker _____ right is darker _____ both are the same shade.
	PREDICTION: _____ left is darker _____ right is darker _____ both are the same shade	ACTUAL: _____ left is darker _____ right is darker _____ both are the same shade

STOP Discuss with your partner: What strategies can you use to predict which paint splat will be the darker shade?

5) Use your strategies from #4 to rank the paint mixtures from lightest to darkest. Try first WITHOUT using the sim. Later, you can use the sim to check your work.

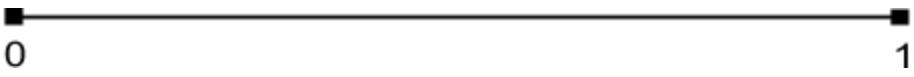
Mixture A  **Mixture B**  **Mixture C**  **Mixture D**  **Mixture E** You create it!  <u>Challenge:</u> Create Mix E such that it is the middle in the list from lightest to darkest.	Lightest: _____ _____ _____ _____ Darkest: _____	Explain or show work to justify your answer.

Pause for the whole-class discussion. Be prepared to explain the strategies you used in #5.

6) For mixtures A, B, C, and D in #5, write a fraction to describe black balloons to total balloons.

	Mixture A	Mixture B	Mixture C	Mixture D
$\frac{\text{\# black balloons}}{\text{Total \# balloons}}$				

7) Place the fractions from #6 on the number line below.



How does the number line help you confirm your answer to #5?