Ν	ame:	
	anno.	

Date:

## Lesson 4.2: Day 3: Does type of SAT prep matter?

EKHS has decided to offer an SAT prep class again this year. It will be offered in two different formats: online or classroom teacher. The counselors want to know which teaching method will yield higher SAT scores so they have allowed us to set up an experiment. 50 students have signed up to take some form of the SAT prep class. (20 seniors and 30 juniors)

1. Outline a completely randomized design to compare the two treatments.

2. The counselors at EKHS hypothesize that the online vs. classroom results could be greatly affected by the grade level of students that were put into each treatment group. They know that seniors generally score better on the SAT than juniors. How could we adjust our experiment to ensure that there is even split of seniors and juniors in each class? Draw an outline of the experiment with your modifications.

3. The counselors are now worried that a student's GPA is certainly going to affect their SAT score. Let's look only at the Juniors. We want to be sure that the different GPAs are being evenly distributed into the two treatment groups. How could we be sure the GPAs are evenly distributed?



Name:	Hour:	Date:

## Lesson 4.2: Day 3: Randomized Block Designs

Big Ideas:

## Check Your Understanding:

Researchers would like to design an experiment to compare the effectiveness of three different advertisements for a new television series featuring the work of Jane Austen. There are 300 volunteers available for the experiment.

1. Describe a completely randomized design to compare the effectiveness of the three advertisements.

2. Describe a randomized block design for this experiment. Justify your choice of blocks.

3. Why might a randomized block design be preferable in this context?

