

Student Teacher/Intern:		Date:
Check one: <input type="checkbox"/> 1 st Placement <input type="checkbox"/> 2 nd Placement		Formal Observation # 1-4:
Unit Title: Ratios and Proportional Relationships		Age/Grade Level: 6th grade
Lesson Title: If the World Were 100 People		Order in Learning Segment: 2
Total # of Students: 20	# IEP Students: 5	# ELL Students: 0

PREPARATION

Context of the Lesson:

- Students have already mastered finding a percent of a quantity as a rate per 100(6.RP.A.3.C). Students have also been introduced to the concept of ratio and know how to use rate language in the context of ratio relationships (6.RP.A.2). In this lesson, they are able to recall their prior knowledge about ratio and apply it to real world and mathematical problems (6.RP.A.3). This lesson is a review for the students in order for me to check for understanding of the concepts of percent and ratio. In the following lessons, students will be learning how to reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations (6.RP.A.3). My students with cerebral palsy are Jake and Martin. Jake has triplegia and only has one functioning hand, his right one. Jake also uses a wheelchair so he sits in the front of the class where he has plenty of space. Martine has monoplegia that only affects his left hand. Jake has a paraprofessional to scribe for him if needed, and both Jake and Martin have an iPad that he has been trained with and uses to share answers and complete activities. Monica is high functioning and excels in math. Monica is given advanced activities so her engagement level stays high as well as her interest. My other two students with ASD are Steven and Kelly, who have problems with focus and their underdeveloped social skills. The teacher's goal is to keep them interacting with non-disabled peers by giving them important roles in the classroom that require social interaction (group work, distribution of materials).

Standards to Address:

- MATH.CONTENT.6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
- CCSS.MATH.CONTENT.6.RP.A.2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship.
- MATH.CONTENT.6.RP.A.3.C Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $30/100$ times the quantity); solve problems involving finding the whole, given a part and the percent.

Academic Language and Language Demands:

- Infer
- Determine
- Synthesize
- Ratio
- Percentage
- Statistic
- Perspective

Assessment Plan:

Objectives	Type of Assessment	Description of Assessment Task/Type	Depth of Knowledge / Bloom's Taxonomy	Adaptations/ Accommodations to Assessment for ELLs/ SWDs
1. Students will be able	Pre-	Students will hold up	Knowledge	-Jake and Martin

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<p>to express their prior knowledge about a percent being a part of 100 by recalling how to make a percent sign into "100". (CCSS:MATH.CONTENT.6.RP.A.3.C)</p>	<p>assessment</p>	<p>their iPad's or whiteboards with their answer.</p>	<p>Understanding</p>	<p>have iPads to communicate their answers as well as complete activities. They also have the option to answer verbally. -Steven and Kelly are assessed based on the observation of their para and the answer they give during classwork.</p>
<p>2. Students will be able to apply their knowledge of percents and ratios by writing a ratio of males to females in the village of 100 people video, by writing it on their whiteboards/iPads and holding it up to show the teacher. (CCSS:CCSS.MATH.CONTENT.6.RP.A.2)</p>	<p>Formative</p>	<p>Students will hold up their iPads or whiteboards with their answer.</p>	<p>Application Understanding Knowledge</p>	<p>-Jake and Martin have the activity on a google drive document on their iPad. -Steven and Kelly are given assistance when requested, from the para.</p>
<p>3. Students will be able to demonstrate their understanding of ratios by using the information from the video to create ratios for all the different categories. (CCSS:CCSS.MATH.CONTENT.6.RP.A.2)</p>	<p>Formative</p>	<p>Students will complete the <i>If the World Was a Village of 100 People</i> activity worksheet.</p>	<p>Application</p>	<p>-Jake will be assisted by his para when he is having trouble writing. Both Jake and Martin are in mixed ability groups. -Steven and Kelly are in the different groups with mixed ability peers. -Monica is given a challenging extension activity.</p>

Materials/Resources/Media Technology Needed:

- Whiteboards/iPads
- Markers and erasers for whiteboards

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<ul style="list-style-type: none"> • Snap cubes 		
INSTRUCTION AND ASSESSMENT		
Time	INTRODUCTION	Accommodations
7 min	<p>Anticipatory Set</p> <ul style="list-style-type: none"> • Teacher will ask Steven and Kelly to hand out the whiteboards and iPads for the select students. • Teacher will have students recall what a percentage is by drawing the percent sign and asking “What can I do with the percent sign to remind me what a percent is?” • Teacher will ask students to write their answers on their white boards (or draw on their iPads) and hold them up when they’re done. • Teacher will choose a student to share their answer with the class. • Student will say “You can turn the percent sign into a 100 by making the slash into a one and the two small circles into two zero’s and that reminds you that a percentage is a part of 100. • Teacher will say “I’m going to show you a video that shows us what the world would be like if it was a village of 100 people. The video is showing real statistics about our world, putting it in the perspective of a small village of 100 people.” • Teacher will review the word perspective by putting it into the context of the lesson. • Now I want you to infer, why would I show you this video when we are doing a unit on percentages and ratios? Turn and talk with your partners.” • Teacher will have pairs share their inferences. 	<ul style="list-style-type: none"> • Jake will have para scribe for him on his iPad if he is unable to draw, opportunities to share answer orally. • Martin is able to use his iPad drawing app to present his answer, opportunities to share answer orally. • Steven and Kelly will be given a choice between using their iPad and a whiteboard. They will continue with their routine of handing out the whiteboards to their classmates (one hands out the markers and erasers and the other hands out the boards.) • Monica is given the information provided by the video so that she can go ahead of the class in figuring out the different ratios. For the turn and talk, Monica is paired up with her close friend in the class whom she feels most comfortable with.
Time	LESSON DEVELOPMENT	Accommodations
	<p>Step-by-Step Input, Checks for Understanding, and Modeling</p>	
1 min	1. Teacher will say “I am going to play the video once through and I want you to be thinking about the different ratios and percentages that you see. Then I’m going to play it a second time and we’re going to discuss it as a class.”	<ul style="list-style-type: none"> • Steven, Kelly, and Monica will be given a sheet with the main information from the video- important text will be bolded (attached).
6 min	2. Teacher will play video: 100 People and pause it after the first 15 seconds to check for understanding and ask “What ratio and percent have we already been given?”	<ul style="list-style-type: none"> • Steven and Kelly are given a choice with how they want to

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	Write it on your whiteboard or iPad and hold it up.” (Students should all have 50 men to 50 women, 50/50 men to women, or 50% men 50% women). Teacher will continue the video.	answer:orally, whiteboard, or iPad. • Jake and Martin are given the opportunity to answer orally or with their ipads or whiteboard.
1 min	3. Teacher will ask Steven and Kelly to hand out the <i>If the World Were 100 People</i> worksheet.	
Time	GUIDED PRACTICE	Accommodations
7 min	Activities (“We do”) • Teacher will say “Now we are going to watch the video a second time and you are going to follow along with your worksheets and fill out the numbers where appropriate.” Teacher will pause the video after the first 15 seconds and go through the first example from the worksheet (attached). • Teacher will pause the video after each section of information so that the students have time to fill out their worksheet.	• Jake and Martin have the worksheet on their iPad, shared through google drive. • Steven and Kelly are given a sheet with the information, just in case it is hard for them to follow along.
Time	INDEPENDENT PRACTICE	Accommodations
15 min	Assignments (“You do”) • Teacher will say “Now you are going to follow the directions and determine all the different ratios we can gather from this video.” • Teacher will present the example on the worksheet by modeling the ratio of men to women in the village of 100. • Teacher will split class into groups of three to complete the activity. • Teacher will walk around to check in on students, especially Steven and Kelly who tend to lose focus quickly. Students are given the option to use snap cubes to help them complete the worksheet.	• Steven and Kelly will have one on one assistance from the teacher and para. They are given hands-on materials such as crayons to keep their focus and understand better. • Jake and Martin are using their iPad for this task and are given any assistance with writing from the para. They are also given the option to use snap cubes. • Monica (and any other student) has an extended worksheet that she can do if she finishes fast (attached).
Time	CLOSURE	
8 min	• Teacher will ask for the class’s focus to be on the front of the room. • Teacher will go over the worksheet by asking a representative from each group to describe how they got to their answer.	• A 10 by 10 grid will be on the smartboard so Steven, Kelly, Martin, and Jake have the option to show their answer in

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	<ul style="list-style-type: none"> • After the presentations, the teacher will lead a discussion by asking/writing on the smartboard this question to the students: “Do you find this information to be shocking? Does it affect you at all?” 	<p>that way.</p> <ul style="list-style-type: none"> • Jake and Martin are able to explain their answers orally. • Jake is assisted by para if he chooses to represent his group in front of the class. • Teacher will write question on the smartboard so the students can refer to it.
Minutes	FURTHER INDEPENDENT PRACTICE AT HOME	Accommodations
3 min	<ul style="list-style-type: none"> • Teacher will ask the students to turn to the last page of the activity. • Teacher will read the directions that ask students to synthesize the information they gathered and choose a statistic that shocked/surprised/confused them the most and write down why. Teacher will hand out the worksheet with all the information with the video as well as send the link to the video to the class google drive shared document. • Teacher will directly teach the word synthesize by saying “Synthesizing is taking all that you learned and producing something out of it. In this case, you are taking the information you learned in class and producing a paragraph.” • The purpose of the assignment is to make an interdisciplinary connection between statistics, writing, and math. Students of all skill level are able to complete this question because it is their opinion and they are given the supports throughout the lesson to fully understand the information. 	<ul style="list-style-type: none"> • Teacher will have a one on one with Jake where he will be able to explain his answer to this question verbally. • Martin is expected to answer this question using voice- to- text on his iPad and sharing it with the teacher. • Steven and Kelly are given the option to verbally answer and have their para scribe. • Monica is given more extension activities to do for her homework if she chooses to challenge herself.

Name _____

Date _____

If the World Were 100 people Information Sheet

Gender

50 women

50 men

Geography

14 Americans

11 Europeans

60 Asians

15 Africans

Religion

31 Christians

23 Muslims

15 Hindus

7 Buddhists

16 Unaffiliated

Language

12 Mandarin

6 Spanish

5 English

4 Hindi

3 Arabic

The rest: 6500 other languages

Education

86 can read and write 14 cannot

Daily Income

15 people make less than \$2 a day

56 people make between \$2-\$10 per day

13 people make between \$10-\$20 per day

9 people make between \$20-\$50 per day

6 people make between \$50-\$90

1 person makes more than \$90 per day

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Health

21 overweight
63 healthy
15 malnourished
1 starving

Water

87 have clean water 13 do not

Shelter

77 have shelter 23 do not

Internet

44 have internet 56 do not

Phones

75 have a mobile 25 do not

College Education

7 attend college 93 don't

Name _____

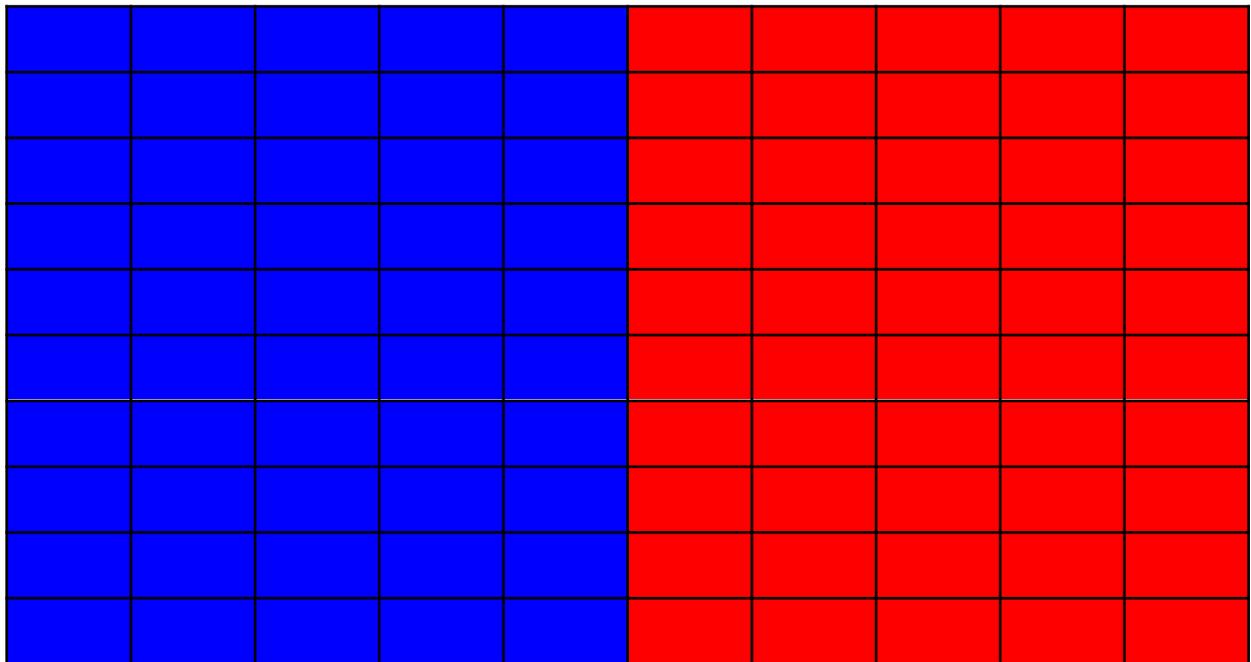
Date _____

If the World Were 100 People Activity

Directions Color in the 100 boxes according to the numbers given to you. Make sure to use different colors for each category. The first one is done for you as an example.

Gender

50 **Male**
50 **Female**



Write a ratio of males to females in our world of 100 people.

50
50

Geography

- ___ Americans
- ___ European
- ___ Asians
- ___ Africans

Ratio of people who live in each geographical location to the rest of the “world”:

America: Europe: Asia: Africa:



Religion

- ___ Christians
- ___ Muslims
- ___ Hindus
- ___ Buddhists
- ___ Unaffiliated

Ratio of each religion to the rest of the “world”:

Christian: Muslim: Hindu: Buddhist: Unaffiliated:



Language

- ___ Mandarin
- ___ Spanish
- ___ English
- ___ Hindi
- ___ Arabic
- ___ 6500 other languages

Ratio of each language to the rest of the “world”:

Mandarin: Spanish: English: Hindi: Arabic: Other:

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Education

- Can read and write
- Cannot read or write

Ratio of people who can read and write to those who cannot:



Daily Income

- ___ people make less than \$2 a day
- ___ people make between \$2-\$10 per day
- ___ people make between \$10-\$20 per day
- ___ people make between \$20-\$50 per day
- ___ people make between \$50-\$90
- ___ person makes more than \$90 per day

Ratio of each daily income to the rest of the “world”:

<\$2: \$2-\$10: \$10-\$20: \$20-\$50 \$50-\$90: >\$90:

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Health

- ___ overweight
- ___ healthy
- ___ malnourished
- ___ starving

Ratio of each health status compared to the rest of the “world”:

Overweight: Healthy: Malnourished: Starving:

Phones

___ have a mobile
___ do not have a mobile

Ratio of those who have internet to those who don't:

College Education

attend college
 do not attend college

Ratio of people who attend college to those who don't:

Name _____
 Date _____

Homework Activity for
If the World Were a Village of 100 People

Directions: Synthesize the information you gathered from the video into one paragraph by choosing a statistic that shocked/surprised/confused you the most and explaining why.

Extension Activity

(aquired from teacherspayteachers.com)

Nationalities

Because there are exactly 100 people in the global village, we can talk about any group of them as a percent of the whole village or the whole world. For example, if 1 person is from Oceania, we can say, “1% of the villagers are from Oceania.” We can also say, “1% of the people of the world are from Oceania.”

1. What percent of the villagers are from Canada and the United States?

1. What percent of the villagers are from Africa?

*Remember, each person in the global village represents 62,000,000 people in the world.

1. Multiply to find out how many people in the world are from Africa.

1. How many people in the world are from the United States?

1. How many people in the world are from the largest continent?

Religions

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1. What percent of the villagers are Christians?
1. What percent of the villagers are not Christians?
1. What are the three most common religions?
1. What percent of the villagers follow one of those three?
1. How many people in the world are non-religious? (Do you remember how many people in the world each villager represents?)
6. How many people in the world are Buddhist or Jewish?
7. Write and answer two problems of your own.