## Math Unit 7 \& 8 Unit and Lesson plans

## Stage 1 Desired Results

Established goals
4.OA.B. 4

- Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range $1-100$ is a multiple of a given one-digit number. Determine whether a given whole number in the range $1-100$ is prime or composite.
4.NF.A
- Explain why a fraction $\mathrm{a} / \mathrm{b}$ is equivalent to a fraction (nxa)/(nxa) by using visual fraction models with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
4.NF.A. 2
- Compare two fractions with different numerators and different denominators e.g. by creating common denominators or numerators or by comparing to a benchmark fraction such as $1 / 2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>,=,<$ and justify the conclusions e.g by using a visual fraction model.


## Transfer

Students will be able to independently use their learning to...

- Use a variety of methods to determine factors/multiples of a given number and or fraction.
- Understand how factors and multiples generate equivalent fractions.
- Be able to put fractions into their simplest form and compare them to benchmark fractions in order to make reasonable decisions.


## Meaning

Understandings
Students will understand that...

- Factors and multiples are closely related.
- Factors of a number can be found in pairs by thinking about multiplication.
- Two fractions that represent the same part of the same whole are equivalent. The two fractions are different names for the same numbers.
- When the numerator and denominator of a fraction are multiplied/divided by a common factor, the result is a equivalent fraction.
- When two fractions have the same denominator the fraction with the greater numerator is greater. When two fractions have the same numerator, the fraction with the lesser denominator is greater.

Essential Questions

- Why is it helpful to know if a number is prime/composite?
- When might you use equivalent fractions in real life?


## Acquisition

## Students will know...

- How to create factors for numbers ranging from 1-100
- The difference between factors and multiples
- What a prime number is
- What a composite number is
- Factors and multiples relate to division

Students will be skilled at...

- Using arrays to find factors
- Using multiplication patterns to identify multiples
- Using area models and number lines to show equivalent fractions
- Using division and multiplication to generate equivalent fractions
- Using models to compare fractions


## Math Unit 7 \& 8 Unit and Lesson plans

Stage 2 - Evidence

| Evaluative Criteria | Assessment Evidence |
| :--- | :--- |

1. Vocabulary foldable: Students will construct a vocabulary foldable which will provide an accurate and concise amount information about prime, composite, factors and multiples. The information they gather will also include examples of the terms above. This task will serve as a connection to previous knowledge as well as an introduction to the upcoming unit.
2. Hershey Bar Activity: Students will break down a whole Hershey Bar into equal portions. Then, they will be asked to model equivalent fractions by comparing how different combinations of pieces relate to each other and as a whole. Once students have shown that they are able to model equivalent fractions, they will then move on to demonstrating their understanding of using multiplication to create equivalent fractions. Lastly, students will use division to create another set of equivalent fractions. This task will show that students can generate equivalent fractions using models, multiplication and division.
3. Jelly Bean Activity: Students will be given a bag of jelly beans and a partner with a different amount of jelly beans in their bag.. Students will count their jelly beans and begin making fractions of the whole by looking at one color at a time. They will the compare their amount of a color fractions with their partners. In doing this, scholars will show that they can use models, number lines, multiplication and division to compare fractions. Additionally, scholars can construct equivalent fractions for an extra push. In order for all students to be successful in this activity, the teachers will thoughtfully choose compatible/incompatible denominators depending on the ability/practice of each pair of students.
4. Fraction Pizza Project: Students will demonstrate their knowledge and understanding of fractions by creating a pizza that represents equal parts of a whole. The students will then make different parts of the whole by using different pizza toppings to make fractions within the pizza. Students will then be asked to answer how many times more pizza they will need for a given amount of people. In order for all students to be successful instructors will give students a template that will give them different equivalent fractions where they will determine how much larger those fractions all.

## (Applicable to all)

Accurately creating factors and multiples for numbers.
Accurately model fractions in models, number lines.
Accurately use multiplication and division to compare fractions and create equivalent fractions.
Accurately use reasoning in order to defend and prove mathematical concepts in class discussions and math talks.

## PERFORMANCE TASK(S):

1. Vocabulary foldable with examples: prime numbers, composite numbers, factors and multiples.
2. Hershey Bar activity: relate manipulative (hershey bar) to fraction knowledge and apply understanding of equivalent fractions using the models, multiplication and division.
3. Jelly Bean Activity: compare fractions using models, number lines, multiplication and division. Generate equivalent fractions.
4. Fraction Pizza project: create a pizza and use toppings and slices to determine fractions, equivalent fractions and relate fractions of a whole to fractions of a set

## OTHER EVIDENCE:

1. Pre-test
2. Quick checks
3. Math Talks and Math Warm Ups
4. Station activities (i.e task cards and worksheets)
5. Homework
6. Test

## Math Unit 7 \& 8 Unit and Lesson plans

| Stage 3 - Learning Plan |  |  |
| :---: | :---: | :---: |
| Days | Lesson Objective | Task |
| Pre-Unit | -- | Preassessment |
| 1 | 7-1: Use arrays to find the factor of a given whole number. | Notes, Video, Guided practice, Independent practice, and Quick check. |
| 2 | 7-2: Use multiplication to find all the factor pairs for a whole number <br> 7-3: Use factors to determine whether a whole number greater then 1 is prime or composite. | Notes, vocabulary, rainbow sheet for factors, and quick check |
| 3 | 7-1/7-2/7-3 Practice | Factor game with rolling dice |
| 4 | 7-5: Use multiplication to find the multiples of a given number. | Notes, Video, Guided practice, Independent practice, and Quick check. |
| 5 | Unit 7 review project | Vocabulary foldable |
| 6 | 8-1: Use area models to recognize and generate equivalent fractions. | Notes, Video, Guided practice, Independent practice, and Quick check. |
| 7 | 8-2: Use a number line to locate and identify equivalent fractions. | Worksheet, math talk, reach assignment questions, and partner activity with poster |
| 8 | 8-3: Use multiplication to find equivalent fractions. | Notes, Video, Guided practice, Independent practice, and Quick check. |
| 9 | 8-4: Use division to find equivalent fractions. | Notes, Video, Guided practice, Independent practice, and Quick check. |
| 10 | 8-3/8/4: Practice | Video and Chocolate bar game with partner |
| 11 | 8-5: Use benchmarks, area models, and number lines to compare fractions. | Word problems, notes, quick check |
| 12 | 8-6: Use models or rename fractions to compare. |  |
| 13 | 8-5/8-6: Practice |  |
| 14 | 8-7: Construct arguments about fractions. | Pizza activity |
| 15 | 8-7: Construct arguments about fractions. | Pizza Activity |
| 16 | 8-7: Construct arguments about fractions. | Pizza Activity |
| 17 | Review day | Study packet |
| 18 | -- | Post assessment |

## Math Unit 7 \& 8 Unit and Lesson plans

Week 1 Unit 7 \& 8

| CCSS | 4.OA.B. 4 <br> - Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite. |
| :---: | :---: |
| Essential Questions | - What are multiples? <br> - What are prime and composite numbers? |
| MONDAY 7-1 | Objective Use arrays to find the factor of a given whole number. |
| 207/208 | Do Now: P. 336 \#1-3, 4-7 and 16-19. Then RIT worksheet. <br> Mini Lesson (I Do): Glue chart paper into notebook. *in google drive* <br> Notes 7-1:Understanding factors <br> Today's lesson goal: Use arrays to find the factor of a given whole number. <br> Vocabulary <br> Factors: numbers that are multiplied together to give a product. <br> Arrays: A way of displaying objects in rows and columns <br> Rows: side to side <br> Columns: up and down <br> Watch Video: Understanding factors: visual learning <br> - 12 chairs, what are the different ways you can put them in rows and columns? <br> - Rows: across <br> - Columns: up and down <br> - 3-by-4, 12-by-1, 6-by-2 <br> - Explain why 5 and 2 wouldn't work.... It has to be equal, you cannot have a not full row or column. <br> - So the factors are $1,2,3,4,6$, and 12 . <br> Guided Practice (We Do): <br> - 8; 1-by-8, 2-by-4. Factors: $1,2,4, \& 8$ <br> - 30; 1-by-30, 2-by-15, 3-by-10, 5-by-6. Factors: $1,2,3,5,6,10,15, \& 30$ <br> - 16; 1-by-16, 2-by-8, 4-by-4. Factors: 1, 2, 4, 4, 8, 16 <br> Independent Practice (You Do): R.7-1 worksheet with a partner *in google drive* <br> Assessment: Quick Check: Using arrays to find the factors for for 27 |
| Differentiation | Got It!: <br> Needs Work: Thumbs down or to the side: meet on the front carpet. <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 373 |

## Math Unit 7 \& 8 Unit and Lesson plans

| TUESDAY 7-2/7-3 | Objective | Use multiplication to find all the factor pairs for a whole number. Use factors to determine whether a whole number greater then 1 is prime or composite. |
| :---: | :---: | :---: |
| 207/208 | Do Now: P <br> Mini Lesso <br> Lesson goa <br> Vocabulary <br> Prime num <br> Composite <br> Guided Pra <br> - Ev <br> - Do <br> - Do <br> Independe <br> - Do <br> - M <br> Assessmen | 7 \#7-12, then RIT worksheet. <br> Do): <br> Notes: Factoring Rainbows and prime or composite numbers. <br> Use multiplication to find all the factor pairs for a whole number. Use factors to determine whether a whole number greater then 1 is prime or composite. <br> s: A whole number greater than 1 that has exactly two factors, itself and 1. Ex; 5-1x5 mbers: A whole number greater than 1 with more than two factors. <br> a rainbow sheet on a big post it note <br> an example with 6 and 50 <br> $6-1 \times 6,2 \times 3$; factors are $1,2,3$, and 6 <br> $50-1 \times 50,2 \times 25,5 \times 10$; factors are $1,2,5,10,25$, and 50 <br> ce (We Do): Rainbow factor worksheet. *in google drive* <br> yone needs a red, orange, blue, green, and purple marker and the rainbow factor sheet <br> 1 together <br> 2 and \#3 with a partner and discuss as a whole class <br> Practice (You Do): <br> --6 alone <br> on to IXL D. 4 <br> Quick check: create a rainbow |
| Differentiation <br> *No Chris* | Got It!: Th <br> Needs Wo <br> IEP Acc./M <br> vocabulary/c <br> examples. <br> visual cues | bs up: IXL 4th grade multiplication D. 4 <br> Small groups based off of previous day quick check. <br> s: Give verbal directions in clearly stated steps. Provide extra examples when teaching new ncepts. Reinforce assignments with verbal instruction. Explain directions and give concrete us on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide d guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 3.79 |  |

## Math Unit 7 \& 8 Unit and Lesson plans

| WEDNESDAY 7-1/7- 2/7-3 | Objective | Use arrays to find the factor of a given whole number. Use multiplication to find all the factor pairs for a whole number. Use factors to determine whether a whole number greater then 1 is prime or composite. |
| :---: | :---: | :---: |
| 207/208 | Do Now: RIT worksheet <br> Math Talk: Find the factors for 100. <br> - Rainbow <br> - Arrays <br> - Background knowledge <br> Mini Lesson (I Do): Give directions for the math game and set expectations. <br> - Partner 1 rolls a dice and records the numbers in the chart in any order they want <br> - Together, as partners, use rainbow sheets, grid paper, or scrap paper to find the factors, and record them on the chart <br> - Then label them as composite or prime numbers <br> - Turn in all of your work <br> Independent practice (You Do): <br> - Factor fun game with dice <br> - Assign partners <br> Assessment: Turn in the worksheet from the game |  |
| Differentiation | Got It!: Ga <br> Needs Wo <br> IEP Acc./M <br> vocabulary/c <br> examples. <br> visual cues | change: <br> Small groups <br> s: Give verbal directions in clearly stated steps. Provide extra examples when teaching new ncepts. Reinforce assignments with verbal instruction. Explain directions and give concrete us on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide d guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 391 |  |

## Math Unit 7 \& 8 Unit and Lesson plans

| THURSDAY | Objective | I can work toward my individualized math goal. |
| :---: | :---: | :---: |
| 207/208 | Do Now: Intervention Assignment <br> Math Goal Workstations: <br> - Station A: Work with a teacher -20 min <br> - front table (bring stools) <br> - Station B: Toss and Talk 5-1: 20min back carpet <br> - Station C: Learning Menu-20min desks <br> - Station D: Follow-up Goal Work-20min desks <br> - Station E: Place Value Building-20 min back carpet <br> Closure: Something you did well, Something you will work to improve on next time |  |
| Differentiation <br> Chris $1 / 2$ (2:10) | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |  |
| Homework |  |  |
| FRIDAY | Objective | I can work toward my individualized math goal. |
| 207/208 | Do Now: Intervention Assignment <br> Math Goal Workstations: <br> - Station A: Work with a teacher -20 min <br> - front table (bring stools) <br> - Station B: Toss and Talk 5-1: 20min back carpet <br> - Station C: Learning Menu-20min desks <br> - Station D: Follow-up Goal Work-20min desks <br> - Station E: Place Value Building-20 min back carpet <br> Closure: Something you did well, Something you will work to improve on next time |  |
| Differentiation <br> Choir Today | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |  |
| Homework | none |  |

## Math Unit 7 \& 8 Unit and Lesson plans

Week 2 Unit 7 \& 8

| CCSS | 4.OA.B. 4 <br> - Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite. <br> 4.NF.A <br> - Explain why a fraction $a / b$ is equivalent to a fraction ( $n \times a$ )/( $n \times a$ ) by using visual fraction models with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. <br> 4.NF.A. 2 <br> - Compare two fractions with different numerators and different denominators e.g. by creating common denominators or numerators or by comparing to a benchmark fraction such as $1 / 2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>,=,<$ and justify the conclusions e.g by using a visual fraction model. |
| :---: | :---: |
| Essential Questions | 1. Why is it helpful to know if a number is prime/composite? |
| MONDAY 7-5 | Objective $\quad$ Use multiplication to find the multiples of a given number. |
| 207/208 | Do Now: p. 393 with a person sitting near you <br> Math Talk: Factors for 72 <br> Mini Lesson (I Do): <br> Notes: Multiples and Factors <br> Lesson goal: Use multiplication to find the multiples of a given number <br> Vocabulary: <br> Multiple: The product of a given whole number and any non-zero whole number <br> Video: 7-5 Multiples; Visual Learning <br> Guided practice (We Do): Write 5 multiples of \#4, 20 and 11. <br> Independent practice (You Do): <br> p. 395 with a partner or with a small group <br> Assessment: Quick check- write 5 multiples of 9 |
| Differentiation | Got It!: p. 395 with a partner, if finished early work on Unit 7 "Today's Challenge" on Pearson Realize <br> Needs Work: Small group <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 397 |

## Math Unit 7 \& 8 Unit and Lesson plans

| TUESDAY unit 7 project | Objective | Show understanding of factors, multiples, prime and composite numbers. |
| :---: | :---: | :---: |
| 207/208 | Do Now: <br> Mini Less <br> Guided P <br> Independ <br> and exam <br> Assessme <br> Prim | lary cards; prime numbers, composite numbers, whole number then RIT assignment <br> ): Model foldable/poster project <br> (We Do): Cut out foldable <br> ctice (You Do): Construct foldable to later be glued into math notebook. Must include definition factors, multiples, prime numbers and composite numbers. |
| Differentiation <br> *No Chris* | Got It!: In math notebook write how you can prove that a number is prime or composite, must prove it in three different ways. <br> Needs Work: Sit with teacher, use textbook for definitions <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |  |
| Homework | P. 398 |  |

## Math Unit 7 \& 8 Unit and Lesson plans

| WEDNESDAY 8-1 | Objective | Use area models to recognize and generate equivalent fractions. |
| :---: | :---: | :---: |
| 207/208 | Do Now: F <br> Mini Lesso <br> Lesson goa <br> Vocabular <br> Numerato <br> Denomina <br> Equivalent <br> fractions a <br> Improper F <br> 8-1 Visual <br> Guided Pra <br> - Ar <br> - Ar <br> Independe <br> 6-7 <br> Assessmen | oldable project, then RIT assignment <br> Notes: Understanding Fractions <br> area models to recognize and generate equivalent fractions <br> number on the top of the fraction, it tells you how many equal parts are being talked about. e number on the bottom of the fraction, it tells you how many equal parts there are. <br> ons: two fractions that represent the same part of the same whole are equivalent. The two rent ways of representing the same number. <br> : a fraction in which the numerator is greater than the denominator <br> ng Video: <br> definitions throughout video <br> the pizza diagram <br> hat both a rectangular area model and a circle are model are acceptable ways to show equivalent <br> as long as you use the SAME DIAGRAM FOR BOTH FRACTIONS <br> (We Do): On chart paper <br> and 9/12 equivalent? Show with rectangle. (YES) <br> and $8 / 10$ equivalent? Show with circle (NO) <br> ctice (You Do): Use models to show equivalent fractions worksheet (on Drive) practice sheets p . <br> ck Check <br> and 12/16 equivalent? Show your work with a model. |
| Differentiation | Got It!: 8-1 <br> Needs Wo <br> IEP Acc./M <br> vocabulary <br> examples. <br> visual cues | y's Challenge" on Pearson Realize *don't forget to assign* <br> mplete worksheet in small group with Lane/Lehner/Cirignani/Valadez <br> Give verbal directions in clearly stated steps. Provide extra examples when teaching new pts. Reinforce assignments with verbal instruction. Explain directions and give concrete on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide uides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 415 |  |

## Math Unit 7 \& 8 Unit and Lesson plans

| THURSDAY | Objective | I can work toward my individualized math goal. |
| :---: | :---: | :---: |
| 207/208 | Do Now: Intervention Assignment <br> Math Goal Workstations: <br> - Station A: Work with a teacher -20min <br> - front table (bring stools) <br> - Station B: Toss and Talk 5-1: 20min back carpet <br> - Station C: Learning Menu-20min desks <br> - Station D: Follow-up Goal Work-20min desks <br> - Station E: Place Value Building-20 min back carpet <br> Closure: Something you did well, Something you will work to improve on next time |  |
| Differentiation <br> Chris $1 / 2$ (2:10) | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |  |
| Homework | P. |  |
| FRIDAY | Objective | I can work toward my individualized math goal. |
| 207/208 | Do Now: Intervention Assignment <br> Math Goal Workstations: <br> - Station A: Work with a teacher - 20 min <br> - front table (bring stools) <br> - Station B: Toss and Talk 5-1: 20min back carpet <br> - Station C: Learning Menu-20min desks <br> - Station D: Follow-up Goal Work-20min desks <br> - Station E: Place Value Building-20 min back carpet <br> Closure: Something you did well, Something you will work to improve on next time |  |
| Differentiation <br> Choir Today | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |  |
| Homework | none |  |

## Math Unit 7 \& 8 Unit and Lesson plans

Week 25 Unit 8


## Math Unit 7 \& 8 Unit and Lesson plans

| $\begin{aligned} & 11: 25-11: 50 \\ & 11: 50-12 \end{aligned}$ | Independent Practice: p. 419, if finished today's challenge <br> Assessment: are 6/8 and 9/16 equivalent? Show with number line |
| :---: | :---: |
| Differentiation | Got It!: 8-2 Today's Challenge on Pearson Realize <br> Needs Work: <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 421 |
| TUESDAY 8-3 | Objective $\quad$ Use multiplication to find equivalent fractions. |
| 207/208 | Do Now: RIT and learning menu <br> *Multiplication test* <br> Mini Lesson (I Do): <br> Notes: <br> Learning goal: Use multiplication to find equivalent fractions <br> Visual Learning Video: 8-3 Generate Equivalent fractions <br> *make sure to go back over why multiplying both the numerator and denominator by the same numbers works (multiplying both by 1 essentially) <br> Guided Practice (We Do): <br> Example problems 3/4th, 1/6th, 2/5th, 8/16th, 3/10th, 4/11th <br> - Prove first example with number line/model <br> Independent Practice (You Do): P. 8 in the practice sheets <br> Assessment: Quick Check: Find three equivalent fractions for 3/9th |
| Differentiation <br> *No Chris* | Got It!: p.426, Today's challenge <br> Needs Work: Small groups <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. |

## Math Unit 7 \& 8 Unit and Lesson plans

|  | Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| :---: | :---: |
| Homework | P. 427 |
| WEDNESDAY $8 / 4$ | Objective $\quad$ Use division to find equivalent fractions. |
| .207/208 | Do Now: RIT and learning menu <br> Math warm up: What is an equivalent fraction for $16 / 36$ th and prove it using multiplication. <br> - Lead into discussion about how it will be easier to divide fractions with larger numbers in order to find equivalent fractions (this works because multiplication and division are inverse operations) RELATE TO COMPATIBLE NUMBERS <br> Mini Lesson (I Do): <br> Video notes <br> Lesson goal: Use division to find equivalent fractions, SIMPLIFY FRACTIONS <br> If you cannot divide the numerator and the denominator by the same factor evenly then that is not a common factor and you must try a different factor. <br> Common factor: A factor two or more numbers have in common <br> 8-4 Visual Learning Video <br> This is also called simplifying because you are turning the original numbers into fractions you are more easily able to visualize, cut etc. <br> Guided Practice (We Do): <br> Example Problems: $16 / 20$ th, $36 / 48$ th, $33 / 88$ th $17 / 38$ th, $19 / 21,28 / 49$ th, <br> Start by finding the factors of both numbers, then divide <br> Independent Practice (You Do): P. 8-4 from reteach pearson <br> Assessment: find two equivalent fractions for 48/64ths using division |
| Differentiation | Got It!: Today's challenge <br> Needs Work: <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 433 |

## Math Unit 7 \& 8 Unit and Lesson plans

| THURSDAY/ FRIDAY | Objective | I can work toward my individualized math goal. |
| :---: | :---: | :---: |
| 207/208 | Do Now: I <br> Math Goa <br> - S <br> - fron <br> - S <br> - S <br> - S <br> - S <br> Closure: S | signment <br> with a teacher - 20 min <br> stools) <br> and Talk 5-1: 20min back carpet <br> ing Menu-20min desks <br> w-up Goal Work-20min desks <br> Value Building-20 min back carpet |
| Differentiation <br> Chris $1 / 2(2: 10)$ | IEP Acc./M <br> vocabular <br> Focus on guides. P | bal directions in clearly stated steps. Provide extra examples when teaching new inforce assignments with verbal instruction. Explain directions and give concrete examples. a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and and verbal rewards on a daily basis. |
| Homework | Thurs: 431 |  |

## Week 4 Unit 7 \& 8

| CCSS | 4.NF.A <br> - Explain why a fraction $a / b$ is equivalent to a fraction ( $n \times a$ )/(nxa) by using visual fraction models with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. <br> 4.NF.A. 2 <br> - Compare two fractions with different numerators and different denominators e.g. by creating common denominators or numerators or by comparing to a benchmark fraction such as $1 / 2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>,=,<$ and justify the conclusions e.g by using a visual fraction model. |  |
| :---: | :---: | :---: |
| Essential Questions | 1. | en might you use equivalent fractions in real life? |
| MONDAY 8-3/8-4 | Objective | Use division and multiplication to find equivalent fractions. |
| 207/208 | Do Now: <br> Mini Less <br> Watch vid <br> How do th | me 2 fractions equivalent to $2 / 3$. How do you know they are equivalent? <br> (I Do): <br> http://www.youtube.com/watch?v=wL4hICyMLKU CUE at 1:14 <br> characters use equivalent fractions to divide the gold equally? |

## Math Unit 7 \& 8 Unit and Lesson plans

|  | Discuss the differences in sizes between the pieces of the bars. How did this affect the way the characters divided up the gold? <br> Independent Practice (You Do): <br> Students will then be given a similar problem to the one in the video. Students will be given a Hershey bar and will work with their partner to come up with equivalent fractions using their Hershey bar as the whole. They may use their candy bar activity mat to help guide their thinking. They will record each equivalent <br> Assessment: Collect the worksheet |
| :---: | :---: |
| Differentiation | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 10 in the practice |
| TUESDAY 8-6 | Objective Use models or rename fractions to compare. |
| 207/208 | Do Now: RIT and learning menu <br> Mini Lesson (I Do): <br> Word problem P436 in the book: Robert needs $3 / 8$ th of a stick of butter to make muffins and $2 / 3$ rd stick of butter to make cookies. Which recipe uses more butter? <br> - Show both recipes with rectangles one on top of the other to compare <br> Example: compare 5/6th and 1/4th, <br> Guided Practice (We Do): Donna ate 7/12th of a box of popcorn. Jack ate 4/10th of a box of popcorn. The boxes of popcorn are the same size. Use a model to show who ate more popcorn. <br> Independent Practice (You Do): P. 17 <br> Assessment: find all of the equivalent fractions for $12 / 18$ by using division |
| Differentiation <br> *No Chris* | Got It!: P. 444 <br> Needs Work: small groups <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 445 |

## Math Unit 7 \& 8 Unit and Lesson plans

| WEDNESDAY 8-5 | Objective | Use benchmarks, area models, and number lines to compare fractions. |
| :---: | :---: | :---: |
| 207/208 | Do Now: <br> Math Talk <br> Guided Pr <br> jelly beans <br> jelly beans <br> bean activ <br> each color <br> CLASS DOJ <br> Independe <br> Assessme | assignment, Learning Menu <br> ice (We Do): Instructions for jelly bean activity. Students will be paired up. Each pair will get $\mathbf{2}$ bags of one for each partner, 1 laminated activity sheet, 2 markers, 3 paper towels. Both students lay out N PAPER TOWEL and count how many total jelly beans each partner has. Write in top section of jelly <br> . Then students start counting colors of jelly beans and making fractions to compare who has more of inally, students show work with number line or fraction bar. ALL PARTNERS UPLOAD WORK ONTO <br> Practice (You Do): jelly bean activity <br> compare 7/12 and 5/8 |
| Differentiation | Got It!: if <br> Needs Wo <br> IEP Acc./M <br> vocabulary <br> Focus on <br> and guides. | ished comparing all colors of jelly beans-generate equivalent fractions for each color of jelly beans. <br> meet with cirignani/lehner/lane for review--still with jelly beans <br> ds: Give verbal directions in clearly stated steps. Provide extra examples when teaching new oncepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 16 in the practice sheet |  |
| THURSDAY | Objective | I can work toward my individualized math goal. |
| 207/208 | Do Now: I <br> Math Goa | rvention Assignment <br> Workstations: <br> ion A: Work with a teacher -20 min t table (bring stools) <br> ion B: Toss and Talk 5-1: 20min back carpet <br> ion C: Learning Menu-20min desks <br> ion D: Follow-up Goal Work-20min desks <br> ion E: Place Value Building-20 min back carpet |

## Math Unit 7 \& 8 Unit and Lesson plans

|  | Closure: Something you did well, Something you will work to improve on next time |
| :---: | :---: |
| Differentiation <br> Chris $1 / 2$ (2:10) | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | none |
| FRIDAY | Objective I can work toward my individualized math goal. |
| 207/208 | Do Now: Intervention Assignment <br> Math Goal Workstations: <br> - Station A: Work with a teacher - 20 min <br> - front table (bring stools) <br> - Station B: Toss and Talk 5-1: 20min back carpet <br> - Station C: Learning Menu-20min desks <br> - Station D: Follow-up Goal Work-20min desks <br> - Station E: Place Value Building-20 min back carpet <br> Closure: Something you did well, Something you will work to improve on next time |
| Differentiation <br> Choir Today | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | none |

Week 5 Unit 7 \& 8

| CCSS | 4.NF.A <br> - Explain why a fraction $a / b$ is equivalent to a fraction ( $n \times a) /(n \times a)$ by using visual fraction models with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. <br> 4.NF.A. 2 <br> - Compare two fractions with different numerators and different denominators e.g. by creating common denominators or numerators or by comparing to a benchmark fraction such as $1 / 2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>,=,<$ and justify the conclusions e.g by using a visual fraction model. |
| :---: | :---: |
| Essential Questions | - When might you use equivalent fractions in real life? |

## Math Unit 7 \& 8 Unit and Lesson plans

| MONDAY 8-7 | Objective Construct arguments about fractions. |
| :---: | :---: |
| 207/208 | Do Now: learning menu <br> This week you are going to show me what you know by using a pizza model to demonstrate your understanding of fractions \& equivalent fractions <br> STEP 1: make pizza ( 10 min ) <br> - 8 EQUAL pieces (fold) <br> - model <br> - Color in cheese/sauce (leave space for crust if you want!) <br> - model <br> - Draw lines in BLACK/BLUE after you make the cheese so that you can see your pieces <br> - model <br> STEP 2: toppings ( 20 min ) <br> - BEFORE gluing, cut and lay out your toppings on your pizza how you want <br> - CHECK to make sure no more than $\mathbf{2}$ pieces are the same <br> - CHECK to make sure you have AT LEAST one topping on each slice <br> - Clarify that there needs to be a variety for this to work <br> - Clarify that there is not a need for more than 4-5 topping cut outs on each piece <br> Glue one down first and then if time do the rest <br> - Glue toppings down <br> STEP 3: decompose your pizza (1 hour) <br> - LIST your ingredients (including CHEESE) <br> - CLARIFY TOPPINGS ARE THE SAME AS INGREDIENTS <br> - Explain abbreviations <br> - Have cheese example ready \& model with another topping <br> - Read first two directions step then model (remember not to make the space between too big) <br> - Now, look at each slice with that same topping on it, pick one slice (or two if they are identical) and record the fraction that contains those toppings in the decomposing column. <br> - USE ABBREVIATIONS WHEN RECORDING <br> - Repeat with all toppings |
| Differentiatio <br> n | Got It!: 8-6 practice buddy \& then math learning menu <br> Needs Work: work with Ms. Lane <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 443 |

## Math Unit 7 \& 8 Unit and Lesson plans

| TUESDAY | Objective | Construct arguments about fractions. |
| :---: | :---: | :---: |
| 207/208 | Do Now: l <br> Math talk <br> Which has <br> - Pi <br> - M <br> Problem <br> - R | menu/finish decomposing if necessary <br> ng on if time: 4 friends have 5 candy bars to split, how many ways could they split them up evenly? <br> ections <br> ppings to compare (can either be single toppings or decomposed column) <br> $h$ benchmark and number line <br> ave a peer check their work? <br> udents that it is a question with items and items within a set so they are trying to find the group vision as the operation) <br> at you are NOT multiplying by 7 for example, you are multiplying by $7 / 7$ which is a whole <br> ou are making a new whole of 56 (or whichever number given) <br> students who were not given a multiple of 8 because they will have to interpret the remainder |
| Differentiatio n <br> *No Chris* | Got It!: math learning menu <br> Needs Work: work with Ms. Lane, go over model again <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |  |
| Homework | P. 444 |  |
| WEDNESDAY | Objective | Construct arguments about fraction using real world models |
| 207/208 | Do Now: s <br> Allow stud <br> Explain Ga <br> - PR | multiplication test *PREP* <br> minutes to finish any work left on their project <br> k <br> hould visit 3-5 of their peers <br> by to determine who will be presenting around the room udents can wander throughout but should be asking thoughtful questions like: ow did you know how many pizzas you would need to feed all the people given? hy did you choose to compare your fractions with the method that you did? hat was the most challenging part for you? Why do you think that? you could do this project again, what would you do differently? RS <br> Walk students through your pizza model (do not focus on the decomposing) <br> how your comparing work \& how you figured out how many pizzas you would need |

## Math Unit 7 \& 8 Unit and Lesson plans

|  | - ALL STUDENTS SHOULD KEEP A LIST OF WHO THEY VISITED AND WRITE DOWN TWO FRACTIONS OF THE SAME TOPPING ON THEIR PEERS PIZZA TO COMPARE LATER |
| :---: | :---: |
|  | 208 pizza party at the end of the day |
| Differentiatio n | Got It!: math learning menu <br> Needs Work: sit with MS. Lane for comparing fractions portion of the participation <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 445 |
| THURSDAY \& FRIDAY | Objective $\quad$ I can work toward my individualized math goal. |
| 207/208 | Do Now: VOCABULARY CARDS/learning menu if not finished <br> Math Goal Workstations: <br> - Station A: Work with a teacher - 20 min <br> - front table (bring stools) <br> - Station B: Toss and Talk 5-1: 20min back carpet <br> - Station C: Learning Menu-20min desks <br> - Station D: Follow-up Goal Work-20min desks <br> - Station E: Place Value Building-20 min back carpet <br> Work with Ms. Lehner/Cirignani: fraction review \& preparation for next week's test |
| Differentiatio <br> n <br> Chris $1 / 2$ (2:10) | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | P. 446 (thurs) no HW friday |

## Math Unit 7 \& 8 Unit and Lesson plans

Week 6 Unit 7 \& 8

| CCSS | 4.OA.B. 4 <br> - Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite. <br> 4.NF.A <br> - Explain why a fraction $a / b$ is equivalent to a fraction ( $n \times a) /(n \times a)$ by using visual fraction models with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. <br> 4.NF.A. 2 <br> - Compare two fractions with different numerators and different denominators e.g. by creating common denominators or numerators or by comparing to a benchmark fraction such as $1 / 2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>,=,<$ and justify the conclusions e.g by using a visual fraction model. |
| :---: | :---: |
| Essential Questions | - When might you use equivalent fractions in real life? |
| MONDAY | Objective $\quad$ Review units 7 \& 8 |
| 207/208 | Do Now: VOCABULARY CARDS, then IXL review skill <br> Mini Lesson (I Do): explain differentiated review groups based on specific skills throughout the unit <br> Guided Practice (We Do): work in small groups on review skills <br> Ms. Lehner/Cirignani rotate working with 4 of the groups <br> REINFORCE COLLABORATIVE LEARNERS <br> Independent Practice (You Do): review skills |
| Differentiation | Got It!: Ms. Lane work with students in back library on applying skills from the unit to real world situations and problem solving tasks <br> Needs Work: Ms. Lehner/ Ms. Cirignani work with individuals if necessary <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | REVIEW HW SHEET |

## Math Unit 7 \& 8 Unit and Lesson plans

| TUESDAY | Objective | Review |
| :---: | :---: | :---: |
| 207/208 | Do Now: <br> Mini Less <br> Guided Pr <br> Ms. Lehne <br> REINFORC <br> Independ | YY CARDS, then IXL review skill <br> xplain differentiated review groups based on specific skills throughout the unit <br> Do): work in small groups on review skills rotate working with 4 of the groups <br> RATIVE LEARNERS <br> (You Do): review skills |
| Differentiation <br> *No Chris* | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. | k with students in back library on applying skills from the unit to real world situations and <br> ner/ Ms. Cirignani work with individuals if necessary <br> verbal directions in clearly stated steps. Provide extra examples when teaching new <br> Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus ime. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. nd verbal rewards on a daily basis. |
| Homework | Review HW sheet 2 |  |
| WEDNESDAY <br> Test | Objective | Take units 7 \& 8 assessment |
| 207/208 | Do Now: <br> Assessme | kills |
| Differentiation | Got It!: <br> Needs Work: <br> IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |  |
| Homework | None |  |
| THURSDAY | Objective | I can work toward my individualized math goal. |
| 207/208 | Do Now: Intervention Assignment |  |

## Math Unit 7 \& 8 Unit and Lesson plans

|  | Math Goal Workstations: <br> - Station A: Work with a teacher - 20 min <br> - front table (bring stools) <br> - Station B: Toss and Talk 5-1: 20min back carpet <br> - Station C: Learning Menu-20min desks <br> - Station D: Follow-up Goal Work-20min desks <br> - Station E: Place Value Building-20 min back carpet <br> Closure: Something you did well, Something you will work to improve on next time |
| :---: | :---: |
| Differentiation <br> Chris $1 / 2$ (2:10) | IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis. |
| Homework | Spring break waterpark packet |

