

Lesson Plan Template

Marisa Mund

Date: 9-26-19

Grade: 4 th		Subject: Math	
Materials: 100 charts, Expo markers, erasers, math notebooks, pencils		Technology Needed: Overhead document camera, computers	
Instructional Strategies: <input type="checkbox"/> Direct instruction <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input type="checkbox"/> Guided practice <input type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> PBL <input type="checkbox"/> Learning Centers <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Lecture <input type="checkbox"/> Modeling <input type="checkbox"/> Technology integration <input type="checkbox"/> Other (list)		Guided Practices and Concrete Application: <input type="checkbox"/> Large group activity <input type="checkbox"/> Hands-on <input type="checkbox"/> Independent activity <input type="checkbox"/> Technology integration <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain:	
Standard(s): 4.OA.4 Determine whether a given whole number in the range 1-36 is prime or composite.		Differentiation Below Proficiency: These students will be allowed to work with a partner while discussing and coloring in the prime numbers on their 100 charts. They will also benefit from the whole group activity for explaining the prime and composite numbers found on the 100 charts. Above Proficiency: These students will have the opportunity to find more prime numbers on their 100 charts past 36. Approaching/Emerging Proficiency: These students will fill out the prime numbers on their 100 charts and complete the worksheet by explaining their thinking. Modalities/Learning Preferences: <ul style="list-style-type: none"> • Visual: These students will be able to see and identify prime numbers, composite numbers, and their factors. • Auditory: These students will hear the definition of prime and composite numbers and will verbalize and hear how to determine such numbers. • Kinesthetic: These students will have an opportunity to get up to retrieve their computers and Expo markers. • Tactile: These students will have the chance to use 100 charts and markers. They will also be able to type and move a computer mouse for a prime and composite online game. 	
Objective(s): By the end of the lesson, the students will explain why they know some numbers below 36 are prime or composite by writing out their thought process on a prime and composite question sheet. Bloom's Taxonomy Cognitive Level: Understanding			
Classroom Management- (grouping(s), movement/transitions, etc.) <ul style="list-style-type: none"> • Have students quietly grab Expo markers while the 100 laminate sheets are being passed out by the paper passer. • Have students work with their regular table partner to fill out their 100 charts. • A classroom chime will be used to regain students' attention. • Students will turn in their assignments to the teacher's desk. • Have the students grab their own personal computers quietly to bring them back to their desks. 		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) <ul style="list-style-type: none"> • Have the students use a voice level zero voice when the instruction is occurring, when the students are taking notes, and when they are on the computer. • Students can use a level 2 voice when called upon or discussing prime and composite numbers with a partner. • Students will be asked to quickly and quietly grab Expo markers and computers while positively reinforcing the students who are following that direction. 	
Minutes	Procedures		
2 min.	Set-up/Prep: <ul style="list-style-type: none"> • Make sure 100 charts and markers are accessible. • Write down some prime numbers on the board 		
3 min.	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) <ul style="list-style-type: none"> • Write a few lower prime numbers on the board like (3,5,7,11,13). 		

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	<ul style="list-style-type: none"> • Tell students to write down the numbers in their math notebooks using a “T” chart <ul style="list-style-type: none"> ○ Have them write the <u>factors</u> or what numbers can be multiplied to produce each number. • Give the students some wait time and after about two minutes, call on a student whose hand is raised to see if they could find something in common about each number and their factors. <ul style="list-style-type: none"> ○ Some students should notice that only one and the number itself goes into these particular numbers.
3 min.	<p>Explain: (concepts, procedures, vocabulary, etc.)</p> <ul style="list-style-type: none"> • Explain to class that numbers such as the examples I gave are called <u>prime numbers</u> which are whole numbers <i>greater</i> than 1 whose only factors are 1 and itself. <ul style="list-style-type: none"> ○ Prime numbers only have two factors. ○ Write down prime number and definition on the marker board, and have students do the same in their notebooks. • Mention that any other number that is not prime or has more than two factors is called a <u>composite number</u>. <ul style="list-style-type: none"> ○ Write down composite and definition on the marker board, and have students do the same in their notebooks. • Give two examples of numbers (17 and 9) and call on the students to explain which number is composite and prime and how they knew that.
20 min.	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</p> <ul style="list-style-type: none"> • Have a paper passer hand out laminated 100 charts and have students retrieve expo markers. • Have the students work with their table partner and color in all the prime numbers up to 36 with their markers <ul style="list-style-type: none"> ○ Give the students about 3 minutes to do this and encourage them to find the prime numbers higher than 36 when they are done. ○ Play the chime to gain back class attention. • As a class, go through which numbers are prime from 1 to 36 and call on students to explain how they knew those problems were prime. • Then, call on students to list some composite numbers to explain why they knew those number were composite. <ul style="list-style-type: none"> ○ Call on the students to explain if they noticed any patterns on their 100 charts. • Have students complete a prime and composite numbers worksheet in their math workbooks on page 24 which will allow them to explain their thinking.
5 min.	<p>Review (wrap up and transition to next activity):</p> <ul style="list-style-type: none"> • Have students complete and turn in their math worksheets when they are finished to the teacher’s desk. • Have students grab their laptop computers to play a prime and composite fruit ninja game. <ul style="list-style-type: none"> ○ Show them on personal computer how to get to the website. <ul style="list-style-type: none"> ▪ sheppardsoftware.com and click on math games at the top ▪ Then, click on factors in “topics in detail” ▪ Finally, click on “prime numbers” game • Tell students to pick which ever level they feel comfortable with and give them 5 minutes to play the game.
<p>Formative Assessment: (linked to objectives, during learning)</p> <ul style="list-style-type: none"> • Progress monitoring throughout lesson (how can you document your student’s learning?) <ul style="list-style-type: none"> • The students will be explaining their thinking in the engage activity. • The teacher will observe the students talking to their peers about prime and 2composite numbers while working on their 100 charts. • The students will have hand-written notes with the examples and definition of prime and composite numbers. 	<p>Summative Assessment (linked back to objectives, END of learning)</p> <ul style="list-style-type: none"> • The students will complete a prime and composite numbers worksheet explaining their thought process.
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</p> <p>The focus of this lesson was on prime and composite numbers. This was an introduction for my fourth-grade students, because they had just learned about factors a couple days prior. So, I had some examples of prime numbers up on the board like 5, 7, and 11. I called on students to find the factors for these numbers, and they were able to quickly tell me that they all had 1 and the number itself as factors. Then, I told them that these numbers are called prime numbers, and I wrote the definition of a prime number on the board for the students to copy into their math notebooks. After that, I told them that any other number that has more than 2 factors is called a composite number. I wrote this</p>	

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definition on the board as well, and I had the students copy it into their notebooks. I realize that it might've been helpful for the students' understanding if I would have also mentioned that composite numbers are the opposite of prime numbers. After writing this definition, I gave another example on the board of a prime and composite number. I called on students to give me factors for both numbers, and then I asked them to explain if the number was prime or composite and why. This question seemed to confuse some of the students. Therefore, I gave them a few more examples of numbers for them to figure out what type of number they were: prime or composite. This did not seem to be helping them too much. So, now I realize I should've modeled more examples of just prime numbers first before introducing composite numbers, and then I should've given more examples and reasons for why other numbers were composite. I believe I released the students too quickly on their own. After that, I still had the students grab 100 charts to check off the numbers from 1 to 36 that were prime, and most of the students struggled with marking the correct numbers. So, I reviewed the numbers they marked off after a few minutes in a whole group setting to try to clear up the confusion and to reiterate what prime and composite numbers are. However, I realize that I should have adapted my lesson at the time to just go through the 100 charts together instead of having the already confused students try to figure it out by themselves at first. Finally, I had the students complete a worksheet that asked them to determine different numbers as prime or composite and to explain how they knew that the number was one or the other. I thought this was a good assignment for checking their understanding. Unfortunately, at this point, I knew that they still needed a lot of guidance and instruction with this concept, so this worksheet would have been more appropriate to assign on day two of learning the concepts. Also, it would have been helpful to remind the students to utilize their 100 charts to help them figure out which numbers were prime or composite. So, for the next time I teach this lesson, I will make sure to really take my time defining and giving examples of prime numbers before I release the responsibility to the students, and then I would probably wait to introduce the idea of composite numbers until later in the day or the next day if the students were still struggling with prime numbers.

Hundreds Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100