

Lesson Printables

Be a rockstar and only print what you need!



Planners: 2-3

Gotcha Challenges

Sunlight: 4

Twilight: 5

Midnight: 6

Extras

Gotcha Rules: 7

Place Value Charts: 8

**Printing in the US? Scale to 'fit to printable area' in order to get the best print.*

LESSON 1: Place Value - Exploring place value

Starter	Main Activity and Input: Identifying the value of digits in a number.	Plenary
<p>Target 20: Can students use the numbers on the blocks to make the target number 20? Students can add, subtract, multiply and divide.</p> <p>To support:</p> <ol style="list-style-type: none">1. Students could repeat block numbers in their number sentences.2. Students could focus on using addition. <p>To challenge:</p> <ol style="list-style-type: none">1. Can students use all 4 operations?2. How many possible solutions can students find?	<p>Input:</p> <ol style="list-style-type: none">1. Slide 6 asks students what they already know about the term place value or what they know about our number system. Give students time to discuss and share ideas on the board. This could be used as a pre-assessment to see what students already know. E.g. Do they use the names of different place value columns?2. Slide 7 shows 4 different types of place value blocks. If you have these in class, give them out to students for them to explore. Ask questions like: What would you call these blocks? Do you notice any connections between them? Slide 8 names the blocks/place value columns. Note, we are using the term 'ones'. Your school or curriculum might use the term 'units' instead. We will be using the term 'ones' throughout our lessons. Slide 8 explains that each place value column is 10 times bigger than the column to its right. You could use place value blocks to model that 1 tens block is made out of 10 ones blocks and 1 hundreds block is made out of 10 tens blocks etc. Slide 8 also asks students what number is represented on the screen. Have students share their thinking. Slide 9 reveals that the number is 1,111.3. Slide 9 asks students if the number 1,111 is odd or even. Elicit from students that if the ones can't be shared evenly, the number is odd. This is modelled on slide 10.4. Slides 11 to 16 model the main activity: playing Gotcha.<ul style="list-style-type: none">- This could be a 1 or 2 player game or students could team up in pairs of 2 and play against each other.- Players take turns dealing out the number of cards that match their learning zone.- Player 1 should look at the number they have made and see if they can knock off any of the Gotcha place value challenges. You can only knock off one challenge per turn.- Now it is Player 2's turn.- The first player to complete all of the challenges or whoever has the most challenges completed when time is called is the winner.- Note, if students wish to play by themselves, they could simply see if they can knock off all of the challenges before reaching the end of the deck of cards. <p>Activity: Play Gotcha.</p> <ol style="list-style-type: none">1. Provide students with playing cards to use. Get rid of 10s, Jacks, Queens and Kings. Aces equal 1.2. Print game instructions which can be found in the printables. <p>To support:</p> <ol style="list-style-type: none">1. Provide students with a place value mat found in the printables for them to lay their cards on.2. Sunlight Zone uses 3-digit numbers. <p>To challenge:</p> <ol style="list-style-type: none">1. Encourage students to prove their thinking. E.g. 9,742 is even because 2 can be shared evenly between 2 groups.2. Students could make the game tactical by moving around their cards to make the best possible option for each turn.	<p>Even Stevens:</p> <p>What are all the even numbers the giraffe can make with 8, 4, 5 and 3?</p> <p>Check for understanding:</p> <ol style="list-style-type: none">1. Can students identify at least one even number that the giraffe can make?

Things that might be useful for this lesson:

- Individual whiteboards:
 - Help students to record their thinking and share ideas with others.
- Place value blocks:
 - Help model the names of place value columns/spots.
 - Can be used to create numbers.
 - Help to show sharing between two groups in order to identify odd and even numbers.
- Playing cards:
 - Helps to add kinesthetic movement .
 - Will be used to make numbers to play the game .



Peek at the Printables:

Sunlight Zone			Twilight Zone			Midnight Zone		
Sunlight Gotcha Challenges								
Gotcha Challenge (The number must...)	My Number	Proof	Gotcha Challenge (The number must...)	My Number	Proof	Gotcha Challenge (The number must...)	My Number	Proof
be odd			be odd			be odd		
be even			be even			be even		
have a zero digit that is double the ones digit			have a zero digit that is double the ones digit			have a zero digit that is double the ones digit		
have an even number in the hundreds spot			have an even number in the hundreds spot			have an even number in the hundreds spot		
have an odd number in the tens spot			have an odd number in the tens spot			have an odd number in the tens spot		
have repeating digits			have repeating digits			have repeating digits		
have 5 hundreds			have 5 hundreds			have 5 hundreds		
have a ones digit that is smaller than all the other digits			have a ones digit that is smaller than all the other digits			have a ones digit that is smaller than all the other digits		
<small>©awesomenicity</small>								



Greener Alternatives:


- Print just a few copies of the rules and post them up somewhere in your classroom. Students could refer to them if needed.
- Laminate the Gotcha challenges and place value charts found in the printables so that they can be used more than once.

Sunlight Gotcha Challenges

Gotcha Challenge (The number must...)	My Number	Proof 
be odd		
be even		
have a tens digit that is double the ones digit		
have an even number in the hundreds		
have an odd number in the tens spot		
have repeating digits		
have 5 hundreds		
have a ones digit that is smaller than all the other digits		


Gotcha Challenge (The number must...)	My Number	Proof 
be odd		
be even		
have a tens digit that is double the ones digit		
have an even number in the hundreds		
have an odd number in the tens spot		
have repeating digits		
have 5 hundreds		
have a ones digit that is smaller than all the other digits		


Twilight Gotcha Challenges

Gotcha Challenge (The number must...)	My Number	Proof 
be odd		
be even		
have a tens digit that is double the ones digit		
have an even number in the thousands spot		
have an odd number in the tens spot		
have repeating digits		
have digits in the thousands and tens that add up to 8		
have a ones digit that is smaller than all the other digits		

Gotcha Challenge (The number must...)	My Number	Proof 
be odd		
be even		
have a tens digit that is double the ones digit		
have an even number in the thousands spot		
have an odd number in the tens spot		
have repeating digits		
have digits in the thousands and tens that add up to 8		
have a ones digit that is smaller than all the other digits		

Midnight Gotcha Challenges

Gotcha Challenge (The number must...)	My Number	Proof 
be odd		
be even		
have a tens digit that is double the ones digit		
have an even number in the thousands spot and an odd number in the ten thousands spot		
have an odd number in the tens spot		
have repeating digits		
have digits in the ten thousands and tens that add up to 8		
have a ones digit that is smaller than all the other digits		

Gotcha Challenge (The number must...)	My Number	Proof 
be odd		
be even		
have a tens digit that is double the ones digit		
have an even number in the thousands spot and an odd number in the ten thousands spot		
have an odd number in the tens spot		
have repeating digits		
have digits in the ten thousands and tens that add up to 8		
have a ones digit that is smaller than all the other digits		

Gotcha Rules

1. Grab a deck of playing cards.
 - Remove 10s, Jacks, Queens and Kings. Aces = 1
2. Choose what level of Gotcha you wish to play.
 - This will tell you how many cards each player should flip over.
3. Player 1 flips over the number of cars that match the level they are playing.
4. Look at the Gotcha challenges below.
 - Can you knock off a challenge?
 - You can only knock off one challenge per turn.
5. Now it is Player 2's turn.
6. The first player to complete all of the Gotcha challenges or with the most challenges when time is called, is the winner!

Sunlight:
Make 3-digit numbers

Twilight:
Make 4-digit numbers

Midnight:
Make 5-digit numbers

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Make 4-digit numbers

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Make 5-digit numbers

Place Value Charts

Ten Thousands	Thousands	Hundreds	Tens	Ones



Ten Thousands	Thousands	Hundreds	Tens	Ones