

## Overview: *The Number Devil*

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### FIRST NIGHT

#### Areas of Focus

- The Importance of One
- Palindromes

#### Focused Words

- infinity: something that goes on forever, never ends
- palindrome: something reads the same forwards and backwards

#### Journal

- Think about a time when you have gotten frustrated with math. Did you overcome it? If so, how did you overcome it? If not, think about a time you were frustrated in school? How did you deal with it?

### SECOND NIGHT

#### Area of Focus

- The Importance of Zero

#### Focused Words

- connection: something that links something together
- Roman numeral: numbers from the Romans – something from the past
- place value: the amount something is worth based on where it is placed

#### Journal Entry

- Write the year in which you were born in Roman numerals and expanded form. Then, state the connection between the two forms.

### THIRD NIGHT

#### Areas of Focus

- Look for Patterns
- Make Connections to Math Class

#### Focused Words

- pattern: something that is repeated multiple times
- black hole: an invisible region in space with a strong pull of gravity
- prime numbers: a number that can only be divided by 1 and itself

#### Journal Entry

- Describe a pattern in nature.

### FOURTH NIGHT

#### Area of Focus

- Characteristic of Unreasonable Numbers

#### Focused Words

- Our focus word for this chapter is irrational numbers; however, this time we have the students derive the definition from their reading.

#### Journal Entry

- Fill in the analogy. Then, provide support from the story. Robert is to math as \_\_\_\_\_ is to \_\_\_\_\_.

## FIFTH NIGHT

### Area of Focus

- Examples & Characteristics of Figurate Numbers

### Focused Words

- figurate number: a number that can be represented by a regular geometric shape
- oasis: dream vacation spot, exotic

### Journal Entry

- Write a pattern using numbers. When you are finished share your pattern with your partner and allow them time to figure out the rule of the pattern.

## SIXTH NIGHT

### Areas of Focus

- Setting & Its Influence
- Fibonacci Sequence

### Focused Words

- setting: where the story takes place
- recursive: a pattern that is repeated over and over

### Journal Entry

- Choose a different setting for this chapter for example, the desert. How would your new setting influence what happened in this chapter? What would be the same? What would be different?

## SEVENTH NIGHT

### Area of Focus

- Connections between Pascal's Triangle & Math Concepts in Previous Chapters

### Focused Words

- pyramid: 3D object made up of triangles with a base of a triangle or another shape
- arithmetic: fancy word for math

### Journal Entry

- What does the author mean by the following sentence, "The Devil is never so grim as he is painted?" What does Pascal mean by "If all men knew what each said of the other, there would not be four friends in the world."?

## EIGHTH NIGHT

### Area of Focus

- Connections

### Focused Words

- permutations: an arrangement of things in a certain order
- factorials: product of all natural numbers that are less than and equal to a number

## NINTH NIGHT

### Areas of Focus

- Find Examples of Infinity
- Find a word in the text that you can figure out its meaning by its affixes.

### Focused Words

- maw: opening
- contingent: change that is dependent on something happening
- interminable: can't end

## TENTH NIGHT

### Area of Focus:

- Look for the Divine Proportion

### Focused Words

- divine proportion: heavenly, equal share of something
- unique: one of a kind
- grotesque: gross

### Journal Entry

- Turn the net into its three-dimensional figure.

## ELEVENTH NIGHT

### Area of Focus

- Look for Connections between Proofs and Life

### Focused Words

- proof: is used in math to prove a concept is true
- conjure: coming up with an idea but in a tricky manner

### Journal Entry

- Analogies
- Reflection

## TWELFTH NIGHT

### Area of Focus

- Final Prediction

### Focused Words

- imaginary number:  $i = \sqrt{-1}$
- revere: to stand in awe of something or something
- habit: clothes worn by a group

### Journal Entry

- Return to your prediction. Was your prediction correct? Why or why not?