



Monster Math Squad  
Teacher Resource Guide

## ABOUT THIS TEACHER RESOURCE GUIDE

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## User Guide

Welcome to Monster Math Squad! Join Goo, Max and Lily as they team up to solve the problems of Monstrovio using the powers of math.

## Viewing with Your Students

**Before you watch** - View the episode before showing it to your students. Prepare language cards for your Math word wall and any activities you will need. Viewing time ranges from 10 to 12 minutes, which is ideal for a primary classroom. Be prepared to start the lessons right after viewing.

**While you watch** - When your students are watching the episode, make sure that they get involved. The Monster Math Squad will try to engage young learners by asking questions. Let students know it is ok to shout out answers as they are viewing.

## Organization of Units

In each unit you will find information to guide you to effectively use the Monster Math Squad activities with your students. Each unit includes the following:

**Synopsis** – To help you prepare your lesson, a brief synopsis of the episode is provided to you.

**Keywords** – Encourage students to listen for the Monster Math Word and shout it out with the Monster Math Squad. Create a special place in your classroom to collect and display math words; include the words from each

episode but don't forget to add your own as your math program develops.

**Activities** – Each episode has two activities. Generally, the first activity will involve more modeled instruction by the teacher, with the second activity involving more independent learning.

**Activity 1** is designed with the young learner in mind. These are activities that introduce the concept and get the students to share their understanding.

**Activity 2** is an extension on the math concept. They will demonstrate their understanding through hands on activities that involve referring to their prior knowledge.

## Curriculum Connections

The materials in this guide were created by elementary teachers following Canadian primary math curricula. The episodes of Monster Math Squad, in conjunction with the unit activities will assist students to:

- Develop mathematical understanding in Number Sense, Geometry, Data Management and Patterning
- Explore math concepts using a variety of learning styles and apply learning to everyday life through problem solving
- See connections between math and other subject areas
- Develop an enjoyment of math and its processes



# Episode 1 Woofie Goes Walking

**Key Concept:** Identifying shapes in our surroundings and using them to create pictures

**Math Terms:** Shape, Triangle, Circle, Square, Star

## Synopsis

Mr. Cranky Pants Monster needs The Monster Math Squad to help walk his pet monster Woofie while he attends his nephew's party in the park. The Squad has never met Woofie before, so they use their knowledge of SHAPES to get to the door that Woofie is standing behind.

## Materials Needed

**Activity 1:** Chart Paper, Shape Cut-Outs or Pattern Blocks, Shape Sorting Mats

**Activity 2:** Shape Cut-Outs or Shape Stickers, Glue

## Activity 1

### *Mining for Shapes*

Set up table centres with shape cut-outs (or pattern blocks) and sorting mats (see handout) of each shape (i.e. all table centres will provide shape cut-outs or pattern blocks and four sorting mats). Review all the shapes from the episode together as a class. Allow students at their centres to sort the shapes and place them on the correct sorting mat. All students at their table centres will pick out square cut-outs and place them on the square sorting mat. They will repeat this process for the remaining shapes.

## Activity 2

### *Monster Maker*

Using shapes (cut-outs or shape stickers) set up a centre for students to make their own monster face. Have students place shapes (triangle, circle, square and star) on a monster body template (see handout). Remember to encourage students to add interesting monster features such as horns and tails, not just eyes, nose and a mouth. Encourage the students to present their monster face to their peers in partners. In a teacher conference, encourage the students to use shape language to identify the parts of their shape monster.

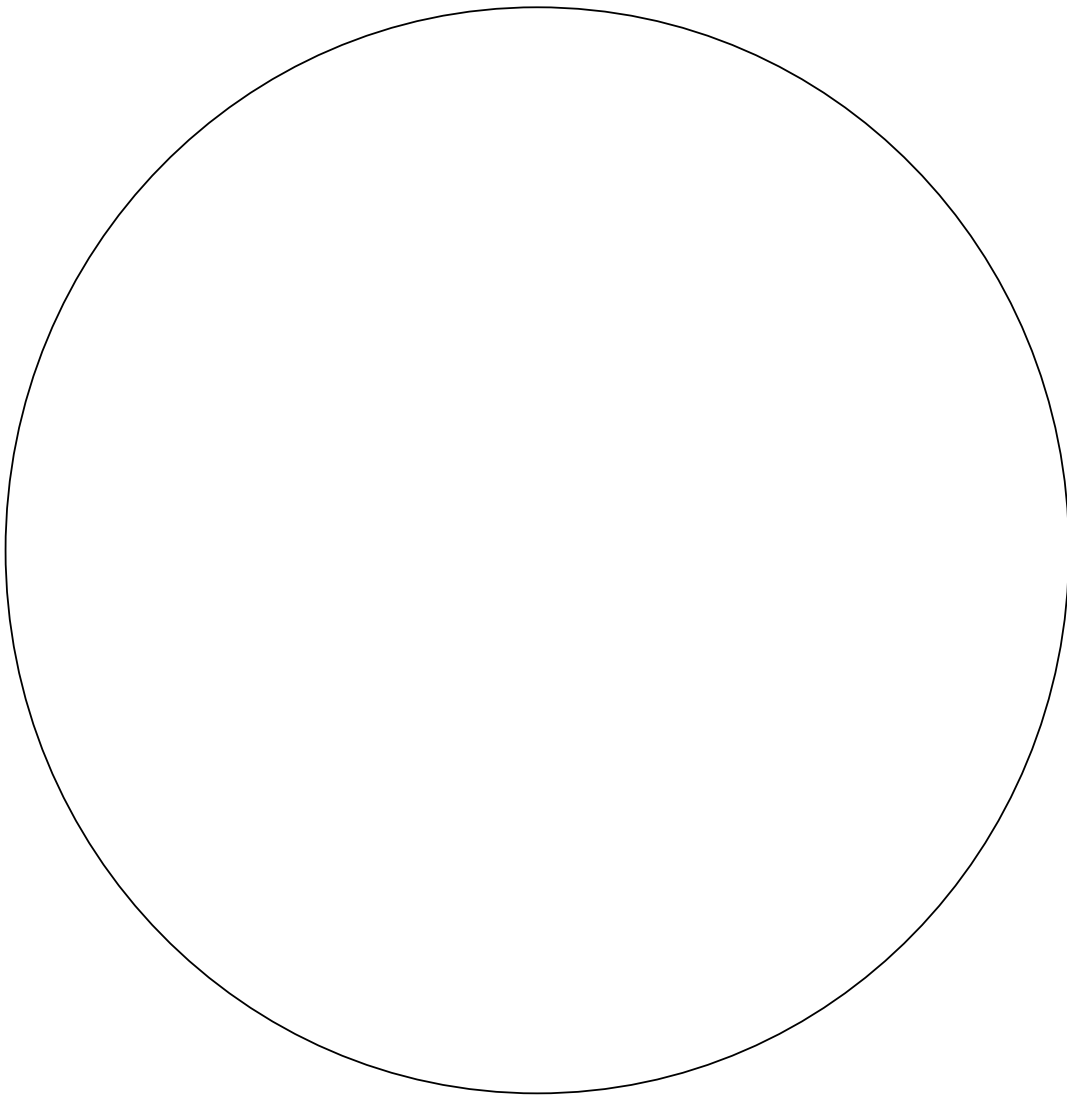
**Extension:** Instruct students to use specific number and kind of shapes to create their own monster face (i.e. create a monster face with two circles, one square, one triangle and two stars)

## Additional Learning Opportunities

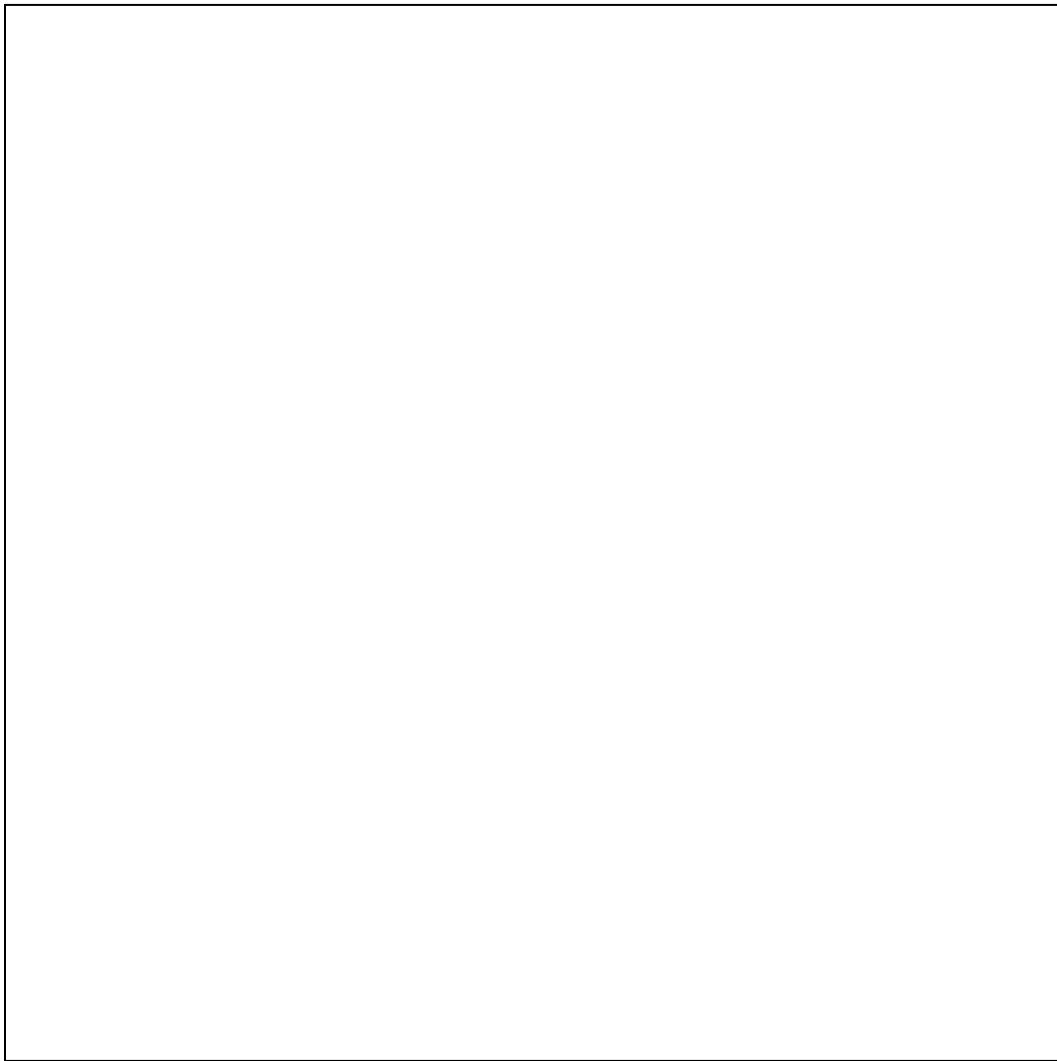
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Art)

Shape Sorting Mats

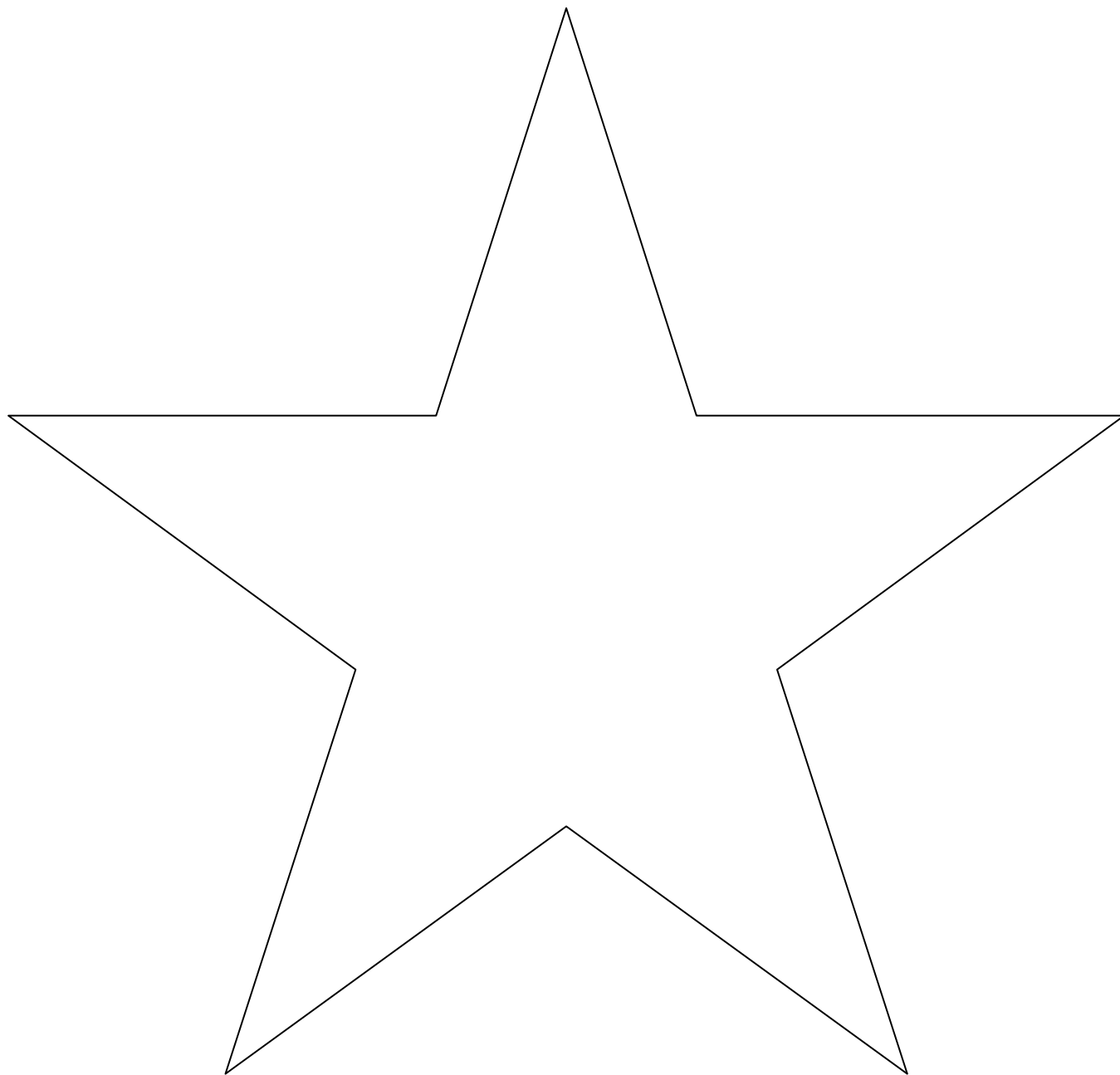
# Circle



# Square

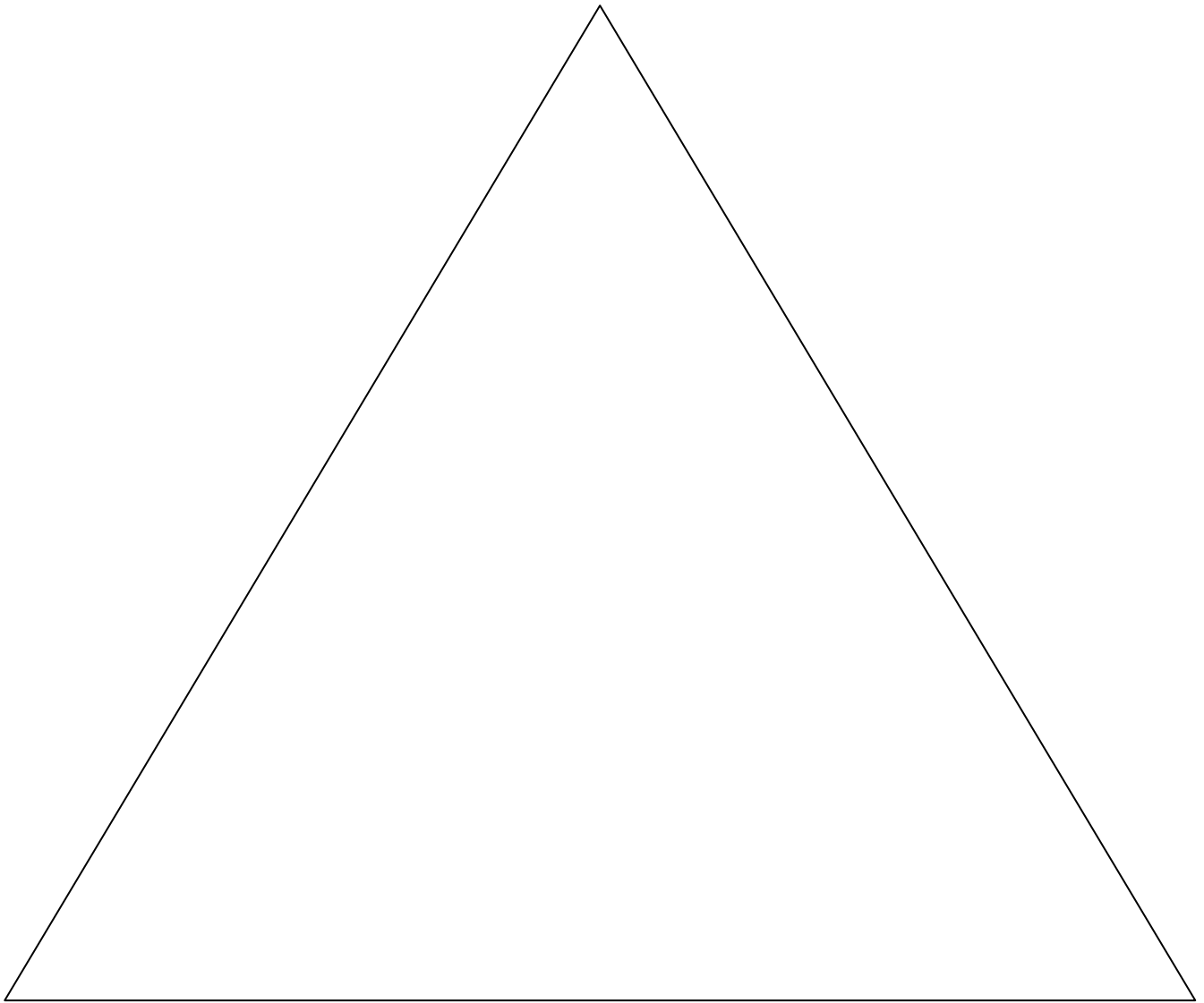


# Star

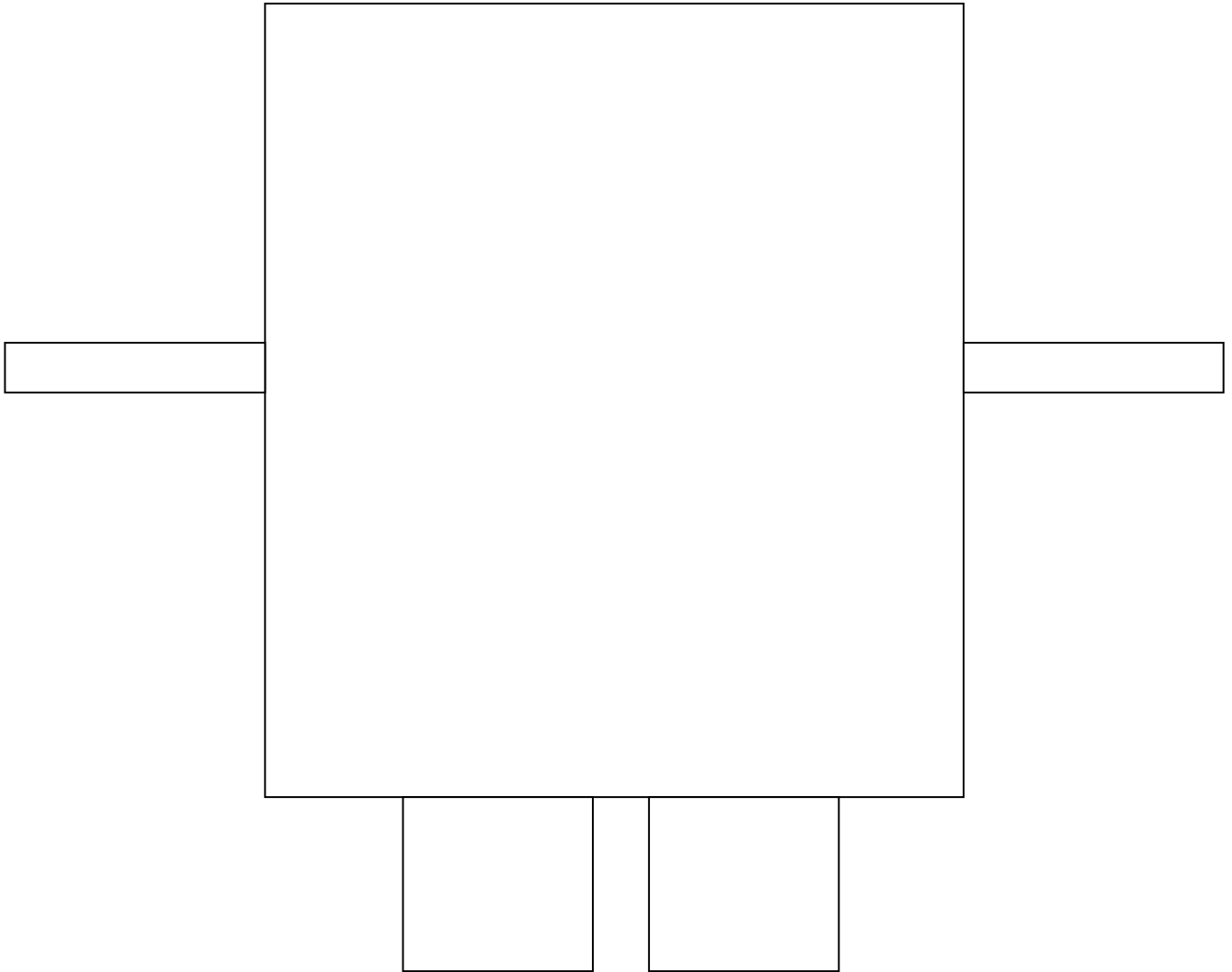




# Triangle



## Monster's Body Template



## Episode 2 Number Muncher Monster

**Key Concept:** Identifying numbers in order and replacing missing numbers in a sequence

**Math Terms:** Count (1–10)

### Synopsis

Ms. Murkly can't bake her slimy grimy monster muffins! She has no way to measure the ingredients as someone has taken the numbers off her scale. All clues lead to the Number Muncher Monster as the culprit, and The Monster Math Squad has to COUNT in order to find out what numbers are missing from Miss Murkly's scale.

### Materials Needed

**Activity 1:** Ten-Frames, Buttons or Beans (any items students can use to count with)

**Activity 2:** Ten-Frame Cut-Outs, Blank Paper

### Activity 1

#### *Count Up and Down*

Demonstrate counting by placing different items on the ten-frames (see handout). Give each student a ten-frame and 55 buttons or beans. Have students share the counting out loud while placing the correct number of buttons or beans on the ten-frames. Make sure students are also including the name of items as they count — “one button, two buttons, three buttons,” etc. Ask students to place different numbers of buttons or beans on the ten-frames (e.g. “Show me three beans” or “Show me five beans”). Have students show the number with their fingers. Repeat the activity for counting down.

### Activity 2

#### *Number Sequence*

Cut out the ten-frames (see handout) so that you have 10 number cards in total. Give each student a set of 10 number cards, but remove one number. Have the students place the nine cards in order identifying the missing number. Once the students are comfortable with the concept, assist them in gluing the sequence on a piece of paper and writing in the missing numbers with a pencil.

**Extension:** Remove multiple numbers and have the students figure out the missing numbers.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

Ten Frames

1	2	3	4	5
6	7	8	9	10

1	2	3	4	5
6	7	8	9	10

## Episode 3 Missing Monster House

**Key Concept:** Identifying and ordering by size

**Math Terms:** Size, Small, Medium, Large, Order, Sort

### Synopsis

Mrs. Huge Horn Monster's monster house went missing and it's up to The Monster Math Squad to help her find it. The Squad learns about SIZE and uses the difference between small, medium and large to follow the right tracks to the park, where Mrs. Huge Horn Monster's monster house is hiding.

### Materials Needed

**Activity 1:** Building Blocks

**Activity 2:** Activity Worksheet, Scissors, Glue

### Activity 1

#### *Tower Building*

Pick one student to be a volunteer for the demonstration of the activity. Show how to build a tower that is smaller than the student, same height as the student and taller than the student using blocks. Label the towers as small, medium and large respectively with the students. Have students go into groups to build their own small, medium and large towers. Let each group pick one student volunteer to represent how tall a "medium" tower is. Ask students to build a tower that is "shorter" and "taller" than the volunteer.

### Activity 2

#### *Candy Hunt*

Have students cut out the smiley candies from the activity worksheet. Once they're done, they can glue the correct candies into the appropriate columns of monsters. For example, students should glue the smallest-sized candies into Boo's column, medium-sized candies to Lily's column and large-sized candies to Max's column.

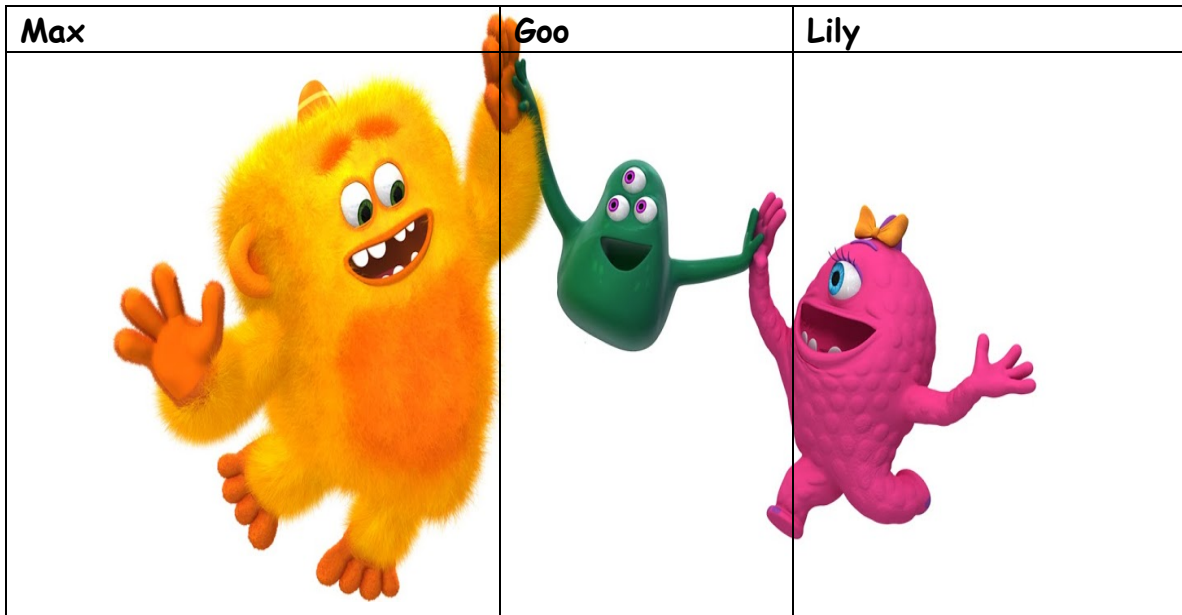
**Extension:** Have students explain how they knew which candies would go into which columns. Ask students to draw different-sized items that may belong to Max, Lily and Boo. Observe to see if they understand the concepts of small, medium and large from their drawings.

### Additional Learning Opportunities

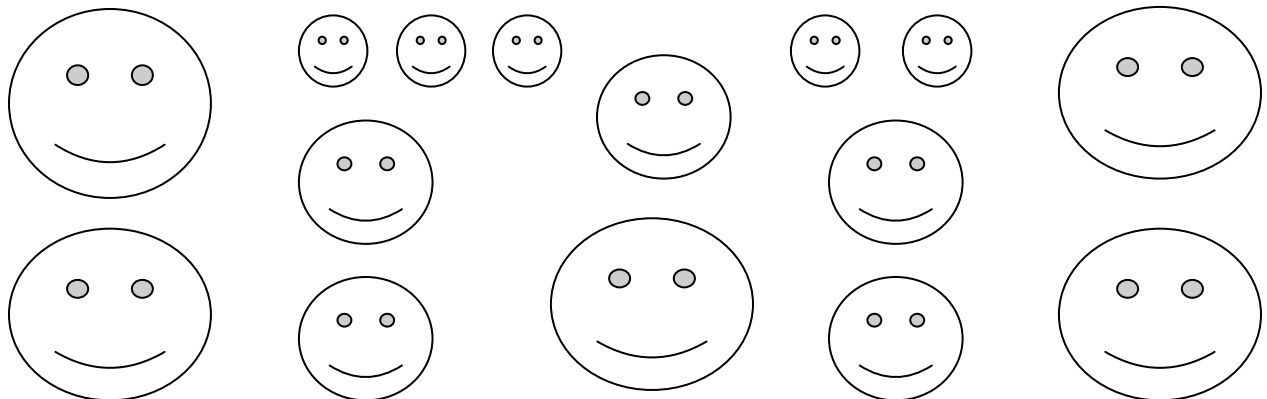
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

### Activity Worksheet

The Monster Math Squad is collecting smiley candies around the town of Monstrovia. Max, who is a **LARGE** monster, can only collect **LARGE** candies. Lily is a **MEDIUM**-sized monster, so she can only collect **MEDIUM**-sized candies. Goo, the smallest of them all, can only collect **SMALL** candies. Can you help the Monster Math Squad collect the correct candies?



Cut here .....



## Episode 4 Big Monster Mess

**Key Concept:** Sorting items into pairs

**Math Terms:** Pairs, Shape, Pattern, Sort

### Synopsis

Mr. Cranky Pants Monster is very cranky as the Mess Monster has turned his place upside down. He calls The Monster Math Squad to help him put his socks into PAIRS and match up Horned Hoots into PAIRS in their cages as he goes to chase after the Mess Monster.

### Materials Needed

**Activity 1:** Coloured Stock Paper, Clothes Pins, Markers

**Activity 2:** Sticky Memo Pads, Markers

### Activity 1

#### *Pin it*

Set up math centres with sets of six primary colour cards (i.e. two blue cards, two red cards, two yellow cards). Colour the tip of the clothes pins with primary colour markers and ensure you have a matching number of clothes pins and colour cards at each math centre (i.e. two blue cards with two blue clothes pin, two red cards with two red clothes pins, etc.). Demonstrate that the colour on the clothes pins matches the colour of the cards. Have students pin the clothes pins to the matching coloured card. Include other attributes such as shapes and numbers; draw them on the cards and clothes pins. Have students pin the cards again.

### Activity 2

#### *Find Your Match*

Prepare sticky notes with a picture of a sock that has two attributes (e.g. blue and four-toed sock). Ensure you have prepared matching pairs of sticky notes according to the number of students in your classroom (e.g. two sticky notes with blue and four-toed socks for one matching pair). Give each student a sticky note and have students go around the classroom to find their matching pair. Once pairs have found each other, guide all pairs to explain how they know that they are pairs.

**Extension:** Challenge the students by placing the sticky notes on students' backs instead. Allow students to help describe each other's socks to find their matching pair. Include more than two attributes for extra challenge (e.g. blue, four-toed, dotted socks).

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

## Episode 5 Garbage Monster Delivers

**Key Concept:** Learning about relationships and attributes by sorting items

**Math Terms:** Sort

### Synopsis

Garbage Monster can't deliver garbage to the town of Monstrovio because the new law requires him to put the correct garbage in the correct bins and he doesn't know which garbage goes in which bin. The Monster Math Squad learns how to SORT by colour and shape and helps the Garbage Monster by putting the correct garbage in the correct bins.

### Materials Needed

**Activity 1:** Bins or Sorting mats, Different items representing certain attributes

**Activity 2:** Venn Diagram, Alphabet Cut-Outs

### Activity 1

#### *How are things Same or Different?*

Using sorting mats or bins, model sorting objects based on established criteria (e.g. circle vs. square, red vs. blue) to the students. Ask eliciting questions to let students think about relationships and how things belong (or don't belong) together. Place different items on the carpet and allow students to sort the items in the correct bins. Once they're done, sort different items into two bins and allow students to guess what the criteria are.

### Activity 2

#### *My name vs. Your name*

Give each student the alphabet cut-outs (see handout) of their names (i.e. John will be given cut-outs of letters J, O, H and N). Students in pairs compare the letters in their names and sort them in a Venn diagram (see handout). For instance, John and Jessie both have a J in their name. Have students count the number of letters that go in the middle of the Venn diagram and record it on the paper (i.e. John and Jessie have only one letter, J, in the middle of their Venn diagram).

**Extension:** Let students go around and compare the letters in their names with other students in the class. Students can try to find the person that shares the most number of letters in their name.

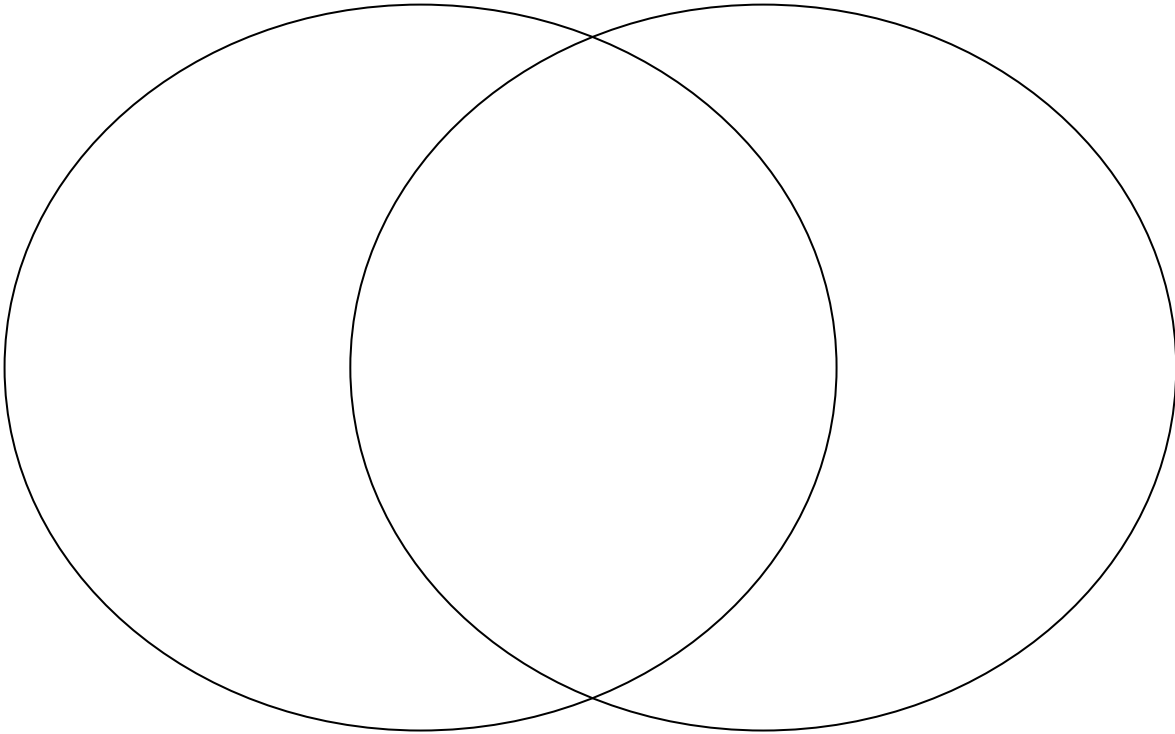
### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning





### My Name Vs. Your Name



A	B	C	D	E	F	G	H
I	J	K	L	M	N	O	P
Q	R	S	T	U	V	W	X
Y	Z						

## Episode 6 Trouble at the Monster Day Care

**Key Concept:** Introducing the concept of mass and comparing items that are heavy and light

**Math Terms:** Mass, Lighter, Heavier

### Synopsis

Mrs. Mopely, the Monster Day Care teacher, asks The Monster Math Squad to help her little monsters with keeping their scary face balloons from floating away. The Monster Math Squad drops by and helps them out by knowing all about things being LIGHT.

### Materials Needed

**Activity 1:** Balance Scale, Various heavy and light items

**Activity 2:** Balance Scale, Modeling Clay

### Activity 1

#### *Which Object is Heavier?*

Place a heavy item and a lighter item on a balance. Ask students which item is heavy and which item is light. Students guess how many more of the light item needs to go on a balance scale for the two sides to balance. Students go in pairs to collect items around the classroom that they can measure using a balance scale. They estimate which items will be light and heavy. Have students compare the masses of various items at their desks.

### Activity 2

#### *The Heavy Monster Challenge*

Pass around a lump of clay for students to feel. Challenge students to create a modeling clay monster that they think is heavier than the one that was passed around. Have students play around with a lump of clay and make their own clay monster. Once they are done, let students come to the front to check whether their monster is heavier using a balance scale.

**Extension:** Have students continue to modify their clay monster to achieve the ideal mass. Early finishers can go into pairs and estimate whose monster is heavier.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Art)

## Episode 7 Uncle Gloop's Big Blunder

**Key Concept:** Identifying, creating and extending different A-B patterns

**Math Terms:** Pattern, Repeat, Triangle, Circle

### Synopsis

Mr. Cranky Pants' last customer, Uncle Gloop, mistakenly left with the wrong scooter. The Monster Math Squad learns all about PATTERNS to follow the trail of the missing scooter.

### Materials Needed

**Activity 1:** Coloured Cubes, Beads or Stickers, Pattern Strips

**Activity 2:** Simple Instruments (if possible)

### Activity 1

#### *Monster Combinations*

Using coloured cubes, beads or stickers, demonstrate creating an A-B pattern to the students. Share the pattern with the students and have them extend it by answering eliciting questions. As concepts develop, have them create their own combinations of A-B-A and A-B-B patterns on a pattern strip (see handout). For example, A-B-A pattern may be represented as red cube – blue cube – red cube. Have students exchange their monster combinations with their peers and extend each other's patterns.

### Activity 2

#### *Extending Patterns with Music*

##### Part 1

Divide the students into three groups: red, blue and green. Write down a repeating red – blue - green pattern. Have students chant their colour group name and stand up in the order of the pattern. For example, red shouts their name, then blue, then green.

##### Part 2

Using the red-blue-green pattern, assign a body percussion sound for each of the colours (or simple instruments if you have them).

For example: Red = clap, Blue = stomp, Green = shout hooray

**Extension:** Have students respond to a variety of A-B-C patterns using their body percussion sounds. Encourage students to come up with different body percussion sounds to use.

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Music)



### Pattern Strips

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## Episode 8 Big Burp Monster at the Library

**Key Concept:** Using numbers to represent different objects

**Math Terms:** Numbers, Count, Group, Organize

### Synopsis

The Monstrovia library is being shaken to its foundation as Big Burp Monster searches for a book! The Monster Math Squad has to learn about NUMBERS to help Miss Shush Monster, the librarian, find the book Big Burp Monster is looking for in the library. The Squad has to get everything straightened out before he can finally get his book, “How to Burp Really Loud.”

### Materials Needed

**Activity 1:** Number Hunt Page, Coloured Crayons

**Activity 2:** Music

### Activity 1

#### *Number Hunt*

Show students some examples of numbers in the classroom (e.g. on a clock face). Give a number hunt page (see handout) to each student. Have students go around the classroom to look for numbers that are on the page. When they find a number, let students colour off the number (e.g. when a student finds the sign “Grade 1” on the classroom door, they can colour off the number 1 on the number hunt page). The student who has the most numbers coloured off will be the winner. Encourage students to write down where they have found the number in the text box at the bottom of the page.

### Activity 2

#### *Find a group*

Begin by having all students stand in the middle of the classroom. Play a short piece of music and encourage students to move around in a designated spot in the classroom. When music is stopped, call out a number (or write it down on the board), and students must get themselves into groups that match this number. Continue the activity until no more groups can be formed. Leftover students can help out calling or writing the numbers.

**Extension:** Call out a number and a specific attribute of students’ clothing. For example, if you call out “Groups of three and red shirt”, students that are wearing red shirts can form groups of three. Ensure you choose attributes that would not eliminate too many students from the game all at once.

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

### Number Hunt

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	31	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Where did you find these numbers?

## Episode 9 Monsters at Play

**Key Concept:** Exploring and applying concepts of more than and less than

**Math Terms:** More, Less, One-to-One

### Synopsis

A group of little monsters play a game of musical chairs, but they have the same number of chairs as monsters – no one can seem to win! The Monster Math Squad arrives at the scene to help figure out how to play the game by knowing all about MORE.

### Materials Needed

**Activity 1:** Paper Plates or Card Stock Paper, Bingo Dabber or Stickers

**Activity 2:** Chairs, Music

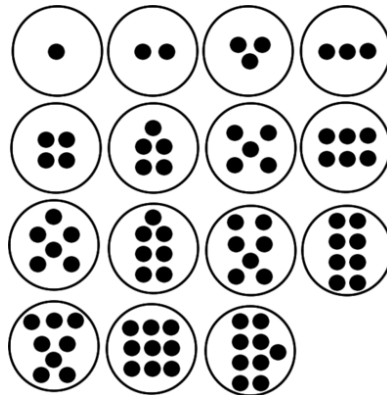
### Activity 1

#### *Estimating Using Dot Plates*

Part 1: Create Dot Plates

Using paper plates or stiff card stock paper, use the pattern provided to make a variety of dot plates or cards. Use a bingo dabber or stickers to represent the 'pips' or the dots on the plates. Try to arrange the dots in a variety of ways as shown (e.g. for a three, make a row of three dots on one plate and on another plate, arrange the three dots into a triangular pattern.)

You should have approximately 15 dot plates or cards like the picture below.



Part 2: Using the Dot Plates

Have students estimate the numbers on the plates (recognizing patterns of dots rather than one-to-one correlation)

## Activity 2

### *Musical Chairs*

Create a game of Musical Chairs and explain the rules and concepts of the game: Each “player” has a spot to sit, less one. A short piece of music is played and when the music stops, players have to compete for a spot. Whoever is left without a seat is “out.” Continue to play, removing one seat at a time, until the remaining players are competing for just one chair.

**Extension:** Have all students sit on a chair in a big circle. Instead of playing music, teacher says, “Switch seats if you/your \_\_\_\_\_”. For example, if you are wearing a blue shirt, if you are wearing glasses, if your favourite color is blue, etc. When the students get up to change seats, pull away one chair. One student will be left standing without a chair. This student can call out the next “Switch seats if” question.

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Guided & Independent Learning



## Episode 10 Monsters Bowl Meltdown

**Key Concept:** Identifying and creating even quantities

**Math Terms:** Even, Uneven

### Synopsis

Even Stevie and Even Evie need The Monster Math Squad’s help. These twins like everything to be EVEN. The Squad drops by and helps show the twins how to play a game of bowling and keep all the pins even as they go! With a little math, The Squad keeps everything even. It comes down to the last shot when the twins have to each knock down one pin at the exact same time!

### Materials Needed

**Activity 1:** Handout, Square Tiles (or other Math Manipulatives)

**Activity 2:** Worksheet, Die (one per pair of students), Dominoes

### Activity 1

#### *Are They Even?*

Using the worksheet (see handout), students circle the images that contain even numbers. Students can write the number next to the image. Next, they check their work by sorting with manipulatives (i.e. to check the first answer, try sorting three square tiles evenly).

### Activity 2

#### *Even Vs. Odd*

Have students go into pairs with a die and an activity sheet (see handout). Player 1 will try to roll even numbers and Player 2 will try to roll odd numbers. Both players will take turns rolling even or odd numbers. If they roll their number, they can move up one spot on the activity sheet. For example, if Player 1 rolls a two, he or she will move one spot. The winner is the first player to get to the finish spot.

**Extension:** Have students switch their roles (i.e. Player 1 will now be Player 2 and vice versa) and continue the activity. Students can also look at domino pieces and sort them into even, odd, or both even and odd categories (i.e. numbers that are even on both sides will be in the “even” category; numbers that are odd on both sides will be in the “odd” category; numbers that are even on one side and odd on the other will be in the “both even and odd” category).

### Additional Learning Opportunities

- ✓ Guided & Independent Learning

Episode 10 Activity 1

Name: \_\_\_\_\_



# Are they Even?

Circle the images that are even


### Even vs. Odd activity sheet



PLAYER 1 (EVEN)

PLAYER 2 (ODD)

## Episode 11 Picky Eater's Picnic

**Key Concept:** Applying the concept of addition in numbers 1–10

**Math Terms:** Add, More, 10, 5, How Many

### Synopsis

Picky Eater Monster is at Barks and Stench General Store trying to figure out exactly how many items are needed for the picnic he is planning for his brother Persnickety Eater Monster! The Monster Math Squad helps out and makes sure they have the exact number of items on the grocery list by learning all about ADDING!

### Materials Needed

**Activity 1:** Ten Frames, Bingo Stickers or Beans

**Activity 2:** Envelopes, Paper Money Template

### Activity 1

#### *Let's make Ten*

Demonstrate how to make a combination of 10 using different coloured bingo stickers, or beans on a ten-frame (e.g. five blue and five red or six red beans and four green beans). Have students work with bingo stickers or beans to make four different combinations of ten. Students should record their combinations using two different coloured markers on the empty ten-frames (see handout).

### Activity 2

#### *Classroom Market*

Encourage parents to help students bring items that they are willing to “sell” to their peers during this activity. Students can set up the items at their desks. Teacher can help students come up with the price for each of their items. The prices will be one dollar, five dollars or 10 dollars. Give each student an envelope filled with paper money (one, five or 10 dollars). Each student should get approximately 20 dollars in total. Divide the class into two, with half of the students acting as “sellers” and the other half being the “shoppers.” Encourage both sellers and shoppers to ask questions regarding the number and price of items they want to sell or buy — e.g. “How much is this item?” “Can I have two of these?” Have the students switch their roles so that students will be given the opportunity to be both “sellers” and “shoppers.”

**Extension:** Have students record the number of items they have bought and the price of each item on a sheet of paper. Ask them to count how much money they have spent in total and how much they have left over.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning



### Ten Frame Toss

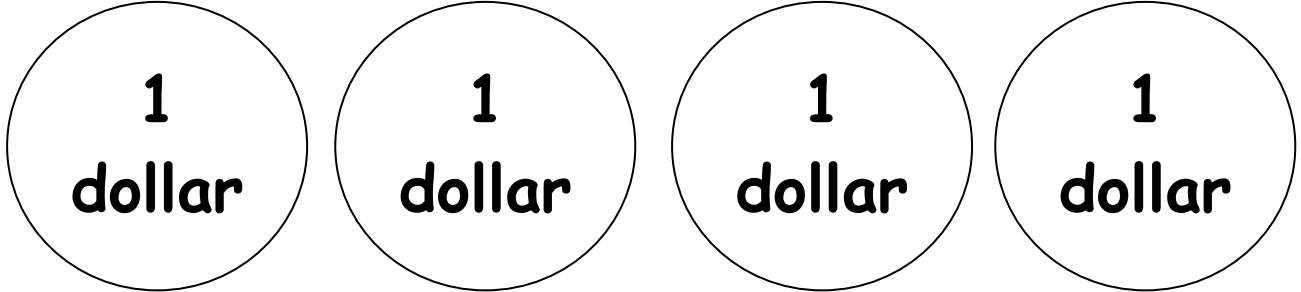
Can you help The Monster Math Squad make different combinations of 10?







Paper Money



5 dollars

5 dollars

5 dollars

5 dollars

10 dollars

10 dollars

10 dollars

10 dollars

## Episode 12 A Muffin Mystery

**Key Concept:** Exploring and applying the concept of half

**Math Terms:** Half, Whole

### Synopsis

Miss Murkly declares she will never bake again since a customer, Mrs. Half Monster, wants to return one of Miss Murkly's famous Heavenly Half Muffins. Mrs. Half Monster claims her order is all wrong. The Monster Math Squad unravels the mystery of why Mrs. Half Monster doesn't want Miss Murkly's famous Heavenly Half Muffin as they learn about HALF.

### Materials Needed

**Activity 1:** Paper Plates, Construction Paper, Glue

**Activity 2:** MIRA or Mirrors, Items that are symmetrical (that can be folded in half or cut in half)

### Activity 1

#### *Pizza Match-up*

Prepare paper plates and provide the students with pre-cut materials for decorating their pizza. Have students glue one type of toppings to one side of the paper plate. For the other half, encourage students to use different types of toppings to decorate the pizza. When they are finished, let students cut their pizza in half, with the assistance of the teacher. Have students exchange their half with their peers while using the terms “half” and “whole.”

### Activity 2

#### *Two Halves Make a Whole*

Collect some items that are symmetrical (e.g. leaves, felt shape cut-outs, etc.). Cut or fold these items into halves. Set up stations where students can take a look at the other half of the items using MIRAs or mirrors. Demonstrate how to draw the other half of the item using MIRAs or mirrors. Have students draw the other half of their chosen item.

**Extension:** Brainstorm with students a list of things that are symmetrical. Encourage students to look at things around the classroom. Draw their attention to symmetry of the body.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Art – Symmetry)



## Episode 13 Who's on First

**Key Concept:** Using the concept of position to learn about first and last

**Math Terms:** Position, First, Last, Front, Next, Behind

### Synopsis

Long Tail Monster is trying to lead the Monster Stinkiness Parade, but whenever he starts marching all the other monsters suddenly disappear! By learning all about POSITION, the Monster Math Squad get all the monsters sorted out, so they can march their stinky march without being wiped out by a long tail!

### Materials Needed

**Activity 1:** Large Space (Gym or Field)

**Activity 2:** Block Cubes, Markers or Crayons

### Activity 1

#### *Train Tag*

Choose a large space like the gym or field. Assign students into equal groups (approximately four) to create different “teams”. The “teams” then create a line where the person in front is held on to by the person behind, (holding on to the hips or shoulders of the person in front) and so on down the line. The object of this game is for the first person to catch the last person in another line. Once caught, they merge into a larger line (the team that caught the other team gets to stay in front). Continue until all teams have been caught and merged into one large line.

### Activity 2

#### *What's the Position?*

Set up centres with four position problems cards (see handout). Have students read out position problem cards and solve the problems using materials such as cubes, crayons or markers and scrap paper. Give time for students to share their solutions with elbow partners. Go over the solution to each problem as a class by asking students to share their findings.

**Extension:** Have students create their own position problems. Students go into pairs and try to solve each other's position problems.

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Language)





### Position Problems Cards

1.

Draw three flowers. The first flower is red. The last flower is yellow.

2.

Make a tower with five cubes. The first cube on top is yellow. The last cube on the bottom is green.

3.

Draw four butterflies. The first butterfly is yellow. The last butterfly is green. The butterfly next to the yellow one is red.

4.

There is a line of four cubes. The first cube is yellow. The last cube is blue. The cube in front of the blue cube is red. The cube behind yellow cube is black.

## Episode 14 Scary Face Picture Day

**Key Concept:** Measuring items and sorting by size

**Math Terms:** Measure, Sort(ing), Size (Small, Large, Tall, Short)

### Synopsis

Mrs. Mopely is having a terrible time sorting out all the different size scary face masks the little monsters have made for Scary Face Picture Day. Using the secret monster math word MEASURE, The Monster Math Squad sorts out the masks and helps the little monsters line up into rows for their scary picture!

### Materials Needed

**Activity 1:** Various items of big and small sizes (Blocks, Cars, etc.), Linking Cubes

**Activity 2:** Yarn, Data Recording Sheet

### Activity 1

#### *Large or Small?*

Using centres, set up themed items (e.g. blocks, cars), that can be categorized as small or large (if suitable, you can include medium). For example, at a building centre, have small and large blocks all mixed up for the students to sort into two piles (small and large). Then, have students measure an item from each pile using the linking cubes available at the centre. Do they notice that one requires more cubes than the other? When complete, students should mix the piles back up to prepare for the next group. Have numerous centres set up in the classroom and divide the students into groups. Rotate students after an allotted time period (e.g. five minutes).

### Activity 2

#### *How Tall Are We?*

Take some yarn and measure each student with it. Give each student their yarn and have them go around the classroom to find someone who is taller and shorter than them. Students should complete their recording sheet (see handout). Create a classroom display of all yarns with the students' names or photos attached.

**Extension:** Have students go around with their yarn to measure items in the classroom that are taller and shorter than them. They can record these results in the handout.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning



## Data Recording Sheet

**I am taller than**

--

**I am shorter than**

--

## Episode 15 Monster Hat Mayhem

**Key Concept:** Identifying and matching sets of one, two and three objects

**Math Terms:** Match, Sets, Same

### Synopsis

Miss Hattie Monster is trying desperately to complete three hats for her next customer, but for some reason the Jingle Monsters and the Puff Monsters keep jumping off the hats! The Monster Math Squad helps Miss Hattie Monster by **MATCHING** the right number of Jingly Monsters to the right number of Puff Monsters on each hat.

### Materials Needed

**Activity 1:** Pictures of themed items in sets of three (e.g. Silverware – fork, knife and spoons), Cardstock Paper or Speech Cards

**Activity 2:** Pictures of themed items in sets of three, Cardstock Paper or Speech Cards

### Activity 1

#### *Three of a Kind*

Create sets of three themed items (e.g. silverware - fork, knife, spoon; sports - baseball, glove, mitt; primary colours - yellow, red and blue). Pictures of items can be cut out and glued on paper (card stock or speech cards may work best) – you may want to have several sets for pairs (or groups) of students to work together. Have students match the item cards together into the same sets (i.e. students should be able to understand that the fork card, knife card and spoon card go together, not the fork card, baseball card and yellow card).

### Activity 2

#### *Concentration Matching*

Prepare sets of three identical cards (at least 12 sets per pair of group of students), or sets of cards that can be matched together (e.g. dog, bone, paw print). This activity is very much like the game “Concentration” and can be played individually, in a pair, or a group. Have three matching cards (rather than two), or sets of each item. Have the cards placed face down on a desk, or the carpet. Students must get all matching cards to continue. If successful, the student places the matching set to the side (to be counted as a point) and tries again. To simplify the game, use only 12 cards in total (four sets).

**Extension:** Include more sets of cards to the game. For example, instead of four sets, have five sets. Have students brainstorm different items that come in sets of three. Let students create their own cards and include them in the game.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

## Episode 16 Slime Cream Sundae

**Key Concept:** Understand and apply the concept of ALL.

**Math Terms:** All, Total, Add

### Synopsis

The monsters help Mr. Slime Cream learn the meaning of ALL. The episode demonstrates how to add to give us the sum of a number (e.g.  $1+1+1=3$  total).

### Materials Needed

**Activity 1:** Monster Cards, Chalkboard or Chart Paper

**Activity 2:** Chalkboard or Chart Paper

### Activity 1

#### *Monster Hide and Seek*

Part 1

Cut out the Monster Cards (see handout) and count them with the students (there are eight). Put all of the cards behind your back except for one. Ask the students if all of the cards are behind your back. Then put them all behind your back.

Part 2

Hide the Monster Cards around the room. When ready, students collect the cards and return them to the teacher. Have the students count the cards with you and ask them if they have collected all of the cards.

### Activity 2

#### *All Here?*

Part 1

Discuss the number of students in the class. Are all of the students at school today? Count the number of people in the class together. What number represents all in the class?

Part 2

Similar to Part 1, question the students on if all of something is present. For example, show them the colours of the rainbow and ask if all the colours are there, or show them the alphabet with one or two letters missing. Require them to identify what is missing.

**Extension:** Take familiar words, such as words from your classroom word wall, and show them to the students with one or two letters missing. Ask if all of the letters are in the word and require them to insert the missing letters.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Language)



## Episode 17 The Big Stink

**Key Concept:** Positional Words

**Math Terms:** Top, Bottom, Side, Front, Back/Behind

### Synopsis

The monsters help Mr. Stinky Feet Monster to find his foot bath ingredients. They use positional words, such as TOP and BOTTOM, to describe where the ingredients are, teaching the students spatial relationships and movements.

### Materials Needed

**Activity 1:** Positional Flashcards, Shoes

**Activity 2:** Positional Flashcards, Classroom

### Activity 1

#### *Stinky Shoe Flash Cards*

Ask students to take off one of their shoes, then have them position the shoe in response to the flashcards you show them (e.g. "Place your stinky shoe on TOP of your desk").

### Activity 2

#### *I Spy*







Using an object in the room, students will play a game of "I Spy" using positional words. Choose an object and use the traditional version of "I Spy," adding a positional word in the description of the object. For example, "I spy with my little eye, something that is ON TOP of the shelf." Have students look around and guess the object that is being described. Continue with a new object and positional word.

**Extension:** The students play this game in pairs with one another. Remind them to use positional words in the description.

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

Positional Cards

<p>Top</p> 	<p>Bottom</p> 
<p>In Front</p> 	<p>Behind</p> 
<p>Beside</p> 	

## Episode 18 Monster Muffin Muddle

**Key Concept:** Following step-by-step instructions

**Math Terms:** Order, Follow (First, Then, Next, Last)

### Synopsis

Miss Murkly is leaving her nephew, Muddle Monster, in charge of her muffin shop, but he gets everything so mixed up. She's hoping The Squad will come over and make monster muffins! Using the term ORDER, the monsters learn how to follow step-by-step instructions in the correct sequence to bring success.

### Materials Needed

**Activity 1:** Cups, Chocolate Drink Powder, Water, Marshmallows, Table

**Activity 2:** Letters in the word MONSTER cut-out, Directions

### Activity 1

#### *Monster Chocolate*

Discuss the importance of following instructions step-by-step. Tell the students that you are all going to make "Monster Chocolate" together, but for it to work properly you must follow the instructions. Then follow your instructions, skipping one of the steps (e.g. "forget" to put the powder in) and discuss why the "Monster Chocolate" didn't turn out the way it should. Then, follow the instructions step-by-step; showing the students how to make it. Allow the students to come up to the table of ingredients and follow the steps with you to make some for themselves.

#### Instructions for Monster Chocolate: Example

First, boil water using a kettle (leave sitting for a few minutes; check that the water is lukewarm when serving to children)

Then, put 2 tablespoons of powder into a cup

Next, fill the cup with water

Last, top with marshmallows

Enjoy!

*\*Always remember to check for food allergies/sensitivities and review school protocols on food\**

### Activity 2

#### *Letter Scavenger Hunt*

Begin by taping the individual letters from the word MONSTER around the room. Have directions in step-by-step order on a sheet of paper that students can carry around (e.g. Step 1: Go to the classroom door. Find the letter next to the door handle. Copy down that letter). When the students do this in the right order, they spell out the word Monster. Ask the students if they didn't go in the right order would they have spelt the word correctly? Why is order important in spelling?

**Extension:** Play this game using words from your Math or Language Word Wall





### **Additional Learning Opportunities**

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Language)

## Episode 19 Little Wally Ball-y Monster

**Key Concept:** What is a slope and what happens when we make something more or less steep?

**Math Terms:** Slope, Flat, Steep

### Synopsis

The Monster Math Squad helps Mr Googly Eyed Monster to get his Wally Ball-y rolling again. Using the math word SLOPE, The Squad discovers that incline changes how a ball rolls and that an object needs to start at the top in order to roll down it.

### Materials Needed

**Activity 1:** Playground Slides

**Activity 2:** Small Ramp, Bigger Ramp, Ping-Pong Ball

### Activity 1

#### *Everybody Slide*

Brainstorm with the students different ways to get down (descend) from a set height (e.g. roof). Once the idea of “slide down” has been discussed, begin prompting the students about slope and angles (with drawings or actual objects). Then, take the students outside to study the playground slide(s) and their slope(s). Discuss how the slide’s slope allows students to gently slide down.

### Activity 2

#### *Which slope is faster?*

In this “Predict and Observe” lesson, the teacher presents students with a ramp that has a gentle slope (approx. 25 degrees) and a large area at the bottom of the ramp to allow a ball to come to a stop naturally. Ask the students to predict what will happen when the ping-pong ball is pushed down the ramp. Try it out and note how far it rolls before stopping. Then, present the students with a ramp that has a smaller slope (under 25 degrees) and have them make predictions on if the ball will move more slowly or more quickly and whether or not it will travel a shorter or longer distance. Have them explain why. Try it out and discuss predictions. Then, increase the slope to about a 45 degree angle, and once again, have them make predictions before releasing and observing the ball.

**Extension:** Relate these slopes to real-life situations and create word questions, asking students to explain *how they know* — e.g. “If you are on a bike, will you move faster rolling down a hallway or down a hill? How do you know?”

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Science)



## Episode 20 Monster Hopscotch

**Key Concept:** Identifying and counting numbers after 10

**Math Terms:** Counting Forwards, After 10, Numbers 1–15

### Synopsis

Using the monster math concept AFTER TEN, The Monster Math Squad helps their friend Hoppity Monster to add the numbers 11 to 15 on his hopscotch game. The monsters teach students how to count and write the numbers 11, 12, 13, 14 and 15.

### Materials Needed

**Activity 1:** Ten Frames, Counters, Dice

**Activity 2:** Pavement, Chalk, Rocks/Small Objects

### Activity 1

#### *Extending Ten Frames*

Using two ten-frame sheets, have students extend counting to 10.

Begin by placing counters on the first ten-frame, placing one on each number until you reach 10. Next, add counters to the next ten-frame and explain that this is counting up from 10 (i.e. one more than 10 is 11). Use a die to help students pick numbers. Students roll and add on to an existing filled ten-frame and cover the corresponding spaces.

**Extension:** Have students begin to write number sentences, e.g.  $10 + \underline{\quad} = \underline{\quad}$

### Activity 2

#### *Build-a-Hopscotch*

Part 1

Build a hopscotch outside with the students labeling it with the numbers one to 15. The students take turns rolling a rock and hopping on the squares to where their rock lands. As the students play, ensure they are reciting the numbers as they hop.

Part 2

Students cut out the squares on the worksheet and glue them onto a separate piece of paper in the order of a hopscotch from one to 15.

**Extension:** Have a longer hopscotch (e.g. one to 20) or a hopscotch game where you must count up by two's or five's enabling the students to practice skip-counting.

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning










Episode 20 Activity 1

Ten Frame

1	2	3	4	5
6	7	8	9	10

Episode 20 Activity 2

Hopscotch

1 	2 	3 	4 	5 
6 	7 	8 	9 	10 
11 	12 	13 	14 	15 

## Episode 21 Sneeze Freeze

**Key Concept:** Introduces students to (1) the concept of something being empty versus something being full and (2) the idea of volume.

**Math Terms:** Full, Empty

### Synopsis

The monsters help Abominable Fridge Monster fill up his fridge body. They discuss what it means when something is empty and FULL.

### Materials Needed

**Activity 1:** Container, Water

**Activity 2:** Small Cups, Many small items (e.g. Counters, Blocks, Pompoms, etc.) or Water, Many different sized/shaped containers.

### Activity 1

#### *Empty or Full?*

Part 1

Discuss the concept of “full” or “filling”

Use examples from around the classroom to question students on what *full* looks like. For example: recycling bin – emptied out when full; pencil crayon box – 12 crayons to make it full; stomach – we feel empty and we eat to feel full.

Part 2

Show students an empty container. Partially fill a container of water and ask the students if the container is full. Ask what you need to do to make it full. Continue to fill the container and question if it is full yet. When the container is very close to being full, discuss what needs to happen for it to be completely full (e.g. water goes right up to the rim).

### Activity 2

#### *Fill the Cup*

Hand out small cups. Allow students to fill their cups using either water or small classroom items. When they believe it is full they may return to the main table for another container of a different size/shape and try filling it. Discuss a few different *full* containers as a class.

**Extension:** Ask students to fill the cup half-full or a quarter-full.

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Science)



## Episode 22 Monster Garbage Heap

**Key Concept:** Identify quantities that are greater and use math language to compare quantities.

**Math Terms:** Greater, Greater than, More than

### Synopsis

The Monster Math Squad helps Garbage Monster to get to the top of his garbage pile. Through the concept of GREATER they discover they need to have more than one box stacked up to get Garbage Monster high enough, but then the stack is too high for him to get onto. Again, using GREATER they learn to make *stairs* with the boxes.

### Materials Needed

**Activity 1:** Lego or Building Blocks of varying sizes

**Activity 2:** Worksheet

### Activity 1

#### *Build a Staircase*

Using Lego or building blocks, discuss as a class how the blocks vary in size (some larger and some smaller) before asking the students to try building a staircase. When setting students up to build a staircase like the one in the episode, be sure to tell students that each stair must be one greater than the last. Once the students are comfortable with the concept, extend to increments of two.

### Activity 2

#### *Greater Than Race*

Introduce the greater than symbol  $>$ . You can describe the concept to the students by saying that the greater than sign looks like an alligator mouth, and that the alligator always wants to “eat” the greater number. Create a set of number cards from the handout for each student. When the teacher says go, students see how many correct combinations they can come up with using the greater than symbol. Record correct answers on a class anchor chart.

**Extension:** Have students use numbers they find around the classroom to come up with more equations, such as using numbers from the calendar (e.g.  $30 > 1$ ).

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

Greater Than Race

1	2	3	4	5
6	7	8	9	10

>	>	>	>	>
---	---	---	---	---

## Episode 23 The Scoop Troop

**Key Concept:** Exploring the concept of capacity

**Math Terms:** Capacity, Different, Same

### Synopsis

The Monster Math Squad helps Picky Eater Monster make loot bags for his brother's birthday party. They discover treat scoops are all the same size, and Picky Eater Monster wants different amounts of each treat in his loot bags. The math word CAPACITY teaches them that different-sized scoops can hold different amounts of treats.

### Materials Needed

**Activity 1:** Containers, Water

**Activity 2:** Containers, Water, Rice, Beans

### Activity 1

#### *Same Capacity*

Using non-standard measures, find different shaped containers that hold the same amount of liquid for comparison. Fill these containers with water and have the students estimate which one holds the most water. Demonstrate to students how even though they are a different shape they hold the same amount of water by pouring each cup into other same-sized cups.

### Activity 2

#### *Hands-On Estimating*

Using non-standard measurement containers, estimate and measure capacity of different materials (e.g. water, beans, rice). At tables in small groups, give the students a challenge by asking them how many cups are needed to fill a container in the middle. Students try this with different materials and record their findings (e.g. It takes 10 cups of water to fill the container; it takes nine cups of beans to fill the container). Record findings and compare with other students in class.

**Extension:** Create capacity word problems. For example, “Jimmy’s bucket holds five cups of beans and Jenna’s bucket holds 10 cups of beans. How many of Jimmy’s bucket’s can fit in Jenna’s bucket?”

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Science)



## Episode 24 Monster Tea Party

**Key Concept:** Counting objects in rows is easier because doing so gives you a starting and stopping place

**Math Terms:** Row, Equal Groups, Counting

### Synopsis

The Monster Math Squad helps Sydney Squid Monster to count her mucky yucky marshmallows. Sydney's marshmallows are placed in a circle, and she keeps counting the same ones twice. Using the concept of ROW, they figure out to start counting at the beginning of the row and stop at the end. They also learn that this applies even when there is more than one row.

### Materials Needed

**Activity 1:** Shape Cut-Outs, Notebooks, Pencils,

**Activity 2:** Ten Frames, Cheerios, Fruit Loops

### Activity 1

#### *Equal Rows*

Starting with a teacher directed activity on the board, have scrambled up similar shapes, drawn or magnetized. For example, have 12 squares in one area of the board with six circles. Tell students that you need to put them into equal rows. Demonstrate setting up three rows of four squares and discuss. When students have understood the basic concept, have them create their rows of shapes in their notebooks. Direct the students to create equal rows with six squares. Students should then create two rows of three. As understanding and confidence grows, challenge them with larger numbers.

### Activity 2

#### *Rows of Ten*

Using a ten-square (or ten-frame), have students place different items in each box. For example, begin by giving each student 10 pieces of cereal (five Cheerios and five Fruit Loops). Have them make one row of five (on the first row of the ten-frame) using Cheerios, then have them fill the second row with Fruit Loops. Ask how many Cheerios and Fruit Loops there are in total, and count them together. Discuss why it was easier to count them in rows than it would be to count them in a pile. Have students continue this by adding another ten-frame, making their way up to three and then four rows of five. You can also have them turn the ten-frame vertically and count in rows of two.

**Extension:** Students practice skip-counting by counting the rows by fives.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

## Ten Squares




## Episode 25 Fall Apart Monster Nose Woes

**Key Concept:** Using positional words to identify location

**Math Terms:** Front, Back, Side

### Synopsis

Using the concept of FRONT, BACK and SIDE, The Monster Math Squad helps Falls Apart Monster discover who took his nose and where to find the person who has it.

### Materials Needed

**Activity 1:** Positional Word Signs

### Activity 1

#### *Move IF*

Place a sign at the front of the room that says FRONT, one at the back that says BACK and signs on the RIGHT SIDE and LEFT SIDE. Start with all of the students standing in the middle of the room facing the front (this is the home base). Instruct the students to move to different positions in the room based on questions. For example “Move to the FRONT of the room *if* you are wearing blue” or “Move to the RIGHT SIDE of the room *if* you take a bus to school.” Continue this until the children seem to be moving to the locations without looking for the signs.

### Activity 2

#### *Teacher Says*

Developed from the traditional game of “Simon Says” play a game of “Teacher Says” by instructing the students to do movements and actions using positional words. For example, if you say “Teacher says lift your right arm” all of the students must lift their right arm. If you do not say “Teacher says” before requesting a movement, the student must sit down. Be sure to vary your use of positional words.

**Extension:** Let students play the role of the teacher and play “Student Says.”

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Guided & Independent Learning

## Episode 26 Bucking Monster Mayhem

**Key Concept:** Identifying and estimating appropriate quantities.

**Math Terms:** Too Many, Not Enough, Enough, Estimate

### Synopsis

The Squad helps little monsters to start and properly ride a bucking monster ride by showing them the difference between TOO MANY and NOT ENOUGH.

### Materials Needed

**Activity 1:** Jars, Pennies, Labels

**Activity 2:** Water Table or Bin of Water, Pennies

*Boat Building Materials:* Paper, Clay, Plastic Wrap, Tin Foil, Tape

### Activity 1

#### *Coin Pass Around*

Set up three jars of pennies and label them A, B and C. In the first jar make sure there are not enough pennies (less than the number of students in the class), in the second there are too many (more than the number of students), and in the third jar there is the right amount (the number of students in the class). Ask them to estimate which jar contains the right amount. Pass out one penny for each student. Have them look around at all of the singular pennies and then estimate which jar has, too many or not enough. Label the jars with the new language.

### Activity 2

#### *How Many Is Too Many?*

Have the students construct boats using the materials provided. At a water table or in a large plastic bin, students will place pennies in their boat one at a time to see how many is too many (i.e. when it sinks). Students should estimate how many pennies they think will be too many and record the results.

**Extension:** Have each student record how many coins their boat could hold on a class t-chart, or have student's work together to create stronger boats.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Science)



## Episode 27 Monster Fang Festival

**Key Concept:** Something is the longest if it is longer than everything else

**Math Terms:** Longest (Longer, Long), Shortest (Shorter, Short), Length, Measure, Time, Seconds

### Synopsis

The Squad are asked to be judges at the famous Fang Festival, where they show us how to measure which are the LONGEST fangs, as well as judge who can hang from their fangs the LONGEST by counting seconds.

### Materials Needed

**Activity 1:** Stop Watches, Chart Paper and Marker

**Activity 2:** Uni-fix cubes (or same-sized blocks), Shoes

### Activity 1

#### *Just a Second*

##### Part 1

Show students how long a second is by having them observe a moving hand on a clock. Discuss how a second is very quick. Next, make a Mind Map on the topic of “What Takes One Second?” and have students brainstorm things that only take one second and add them to the Mind Map.

##### Part 2

Students estimate how many seconds it takes them to do certain classroom tasks (e.g. put my book away), then they complete that task while a partner times them using a stop watch.

### Activity 2

#### *How Long is My Foot?*

Model to students how to measure using non-standard units by showing how many uni-fix cubes long an object is (such as the teacher’s shoe). Be sure to emphasize the importance of starting at the beginning and stopping at the end, with the cubes touching along the way. Next, have students remove one shoe and set it on their desk. Using uni-fix cubes the students then measure to see how many cubes long their own shoe is.

**Extension:** Record the results on a t-chart at the front of the room. Discuss who has the longest foot and shortest foot.

### Additional Learning Opportunities

- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

## Episode 28 Monster Road Hockey

**Key Concept:** Identify and apply the concept of creating equal groups through division.

**Math Terms:** Divide, Half, Even, Equal

### Synopsis

Garbage Monster contacts The Squad requesting help making teams for Monster Road Hockey. The Squad uses the word DIVIDE to make two teams out of four players by putting two players on each team. When another player joins, Goo divides into two so the teams remain even.

### Materials Needed

**Activity 1:** Four hula-hoops

**Activity 2:** Ten frames, Counters (two different colours), Projector/SMART Board

### Activity 1

#### *Form a Team*

Place four hula-hoops into the corners of a classroom or a gymnasium. One at a time, students choose a hoop to stand in, spreading themselves out equally and copying how the monsters split themselves off in the episode. Alter the number of hula-hoops to reflect class numbers. Discuss how many ways the class can be divided. Discuss the concept of remainders if there are remainders.

### Activity 2

#### *Ten Frame Fun*











Give each student a ten-frame worksheet, along with 10 counters. Ensure that half of the counters are one colour and the other half are another colour (e.g. blue and red). As a class, test the students by requesting different groupings, such as “If I have a group of 10 and want to make equal teams, how many people will be on each team?” Instruct your students to use their counters and ten-frame sheets to figure out these questions. Demonstrate answers on a SMART Board or use a projector so students can follow along while also participating at their own desks.

**Extension:** Have the students record their answers as math equations (e.g. If there are 10 players and two teams then  $5+5=10$ ).

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning

Ten Frame

1 	2 	3 	4 	5 
6 	7 	8 	9 	10 

## Episode 29 Monster Traffic Trouble

**Key Concept:** Exploring the concept of linear lines in geometry

**Math Terms:** Line, Straight, Curve(d)

### Synopsis

In an introduction to geometry, The Squad introduces us to the word LINE. The Squad helps Mr. Cranky Pants Monster, whose scooter is stuck on the road. They recognize that the road is curved but the lines on the road are straight and they use the concept of straight and curved lines to re-paint the lines.

### Materials Needed

**Activity 1:** Glue, Yarn, Paper, Markers

**Activity 2:** Camera or Magazines, Bulletin Board

### Activity 1

#### *Line Art*

Have students use strips of yarn dipped in glue to create designs on paper. Ensure that they include both straight and curved lines in their design. The students can then use markers to colour in and around their art. In a class discussion, confer about the lines in the art, eliciting the words line, straight and curved.

### Activity 2

#### *Picture Board*

Take a walk around your school and classroom and look for items that have straight and curved lines. Using a digital camera take pictures and then print them for a class bulletin board. Have the students circle where the straight and curved lines are. If access to a camera is difficult, have students cut pictures from magazines and flyers.

**Extension:** Strengthen parent involvement by asking the students to take photos at home of things with straight or curved lines to add to the board.

### Additional Learning Opportunities

- ✓ Physical Activity
- ✓ Modeled & Shared Learning
- ✓ Guided & Independent Learning
- ✓ Cross-Curricular Opportunities (Art)



## Episode 30 A Bungle at Barks and Stench

**Key Concept:** You must put things in a certain place and in a certain order to achieve proper results.

**Math Terms:** Place, Order

### Synopsis

The Monster Math Squad helps Mr. Cranky Pants Monster put away his toys, but they discover that the toys and the Monster Marbles are fussy about the proper spot they belong in. The Squad uses the concept of PLACE and order to help solve the problem.

### Materials Needed

**Activity 1:** Egg Carton with cups labelled one to six, Die, Marbles

**Activity 2:** Egg Carton with cups labelled one to 12, Pair of Dice, Marbles (two colours)

### Activity 1

#### *Egg Carton Game I*

Each player has an egg carton with spots numbered from one to six. Players take turns rolling a die. When the numbers one to six come up they may place a marble in the corresponding spot. The first player to fill all six spaces in their egg carton wins.

### Activity 2

#### *Egg Carton Game II*

Each player has a numbered egg carton (from one to 12). Players take turns rolling a pair of die. They must add both die together to come up with a number. They place a marble in the corresponding spot. The first player to fill all 12 of their spaces wins. This game can be played with up to six players.

**Extension:** Each student has a different colour of marbles. Have the students share a numbered egg carton and take turns rolling a pair of die. When they roll a number that is empty, they place their marble in the spot, but if they roll a number that has already been filled by their opponent they remove their opponent's marble. The first player to have three in a row wins.

### Additional Learning Opportunities

- ✓ Guided & Independent Learning

NAME: \_\_\_\_\_



Monster Colouring!

