ST Math®

# Summer Immersion

## Problem Solving Slide Deck

### Grade 4

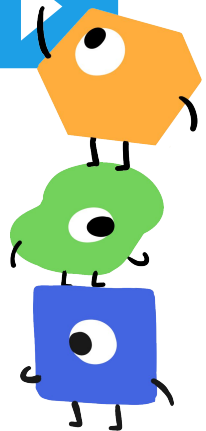
Module 1

Let’s get started on the fun!

Who is JiJi?

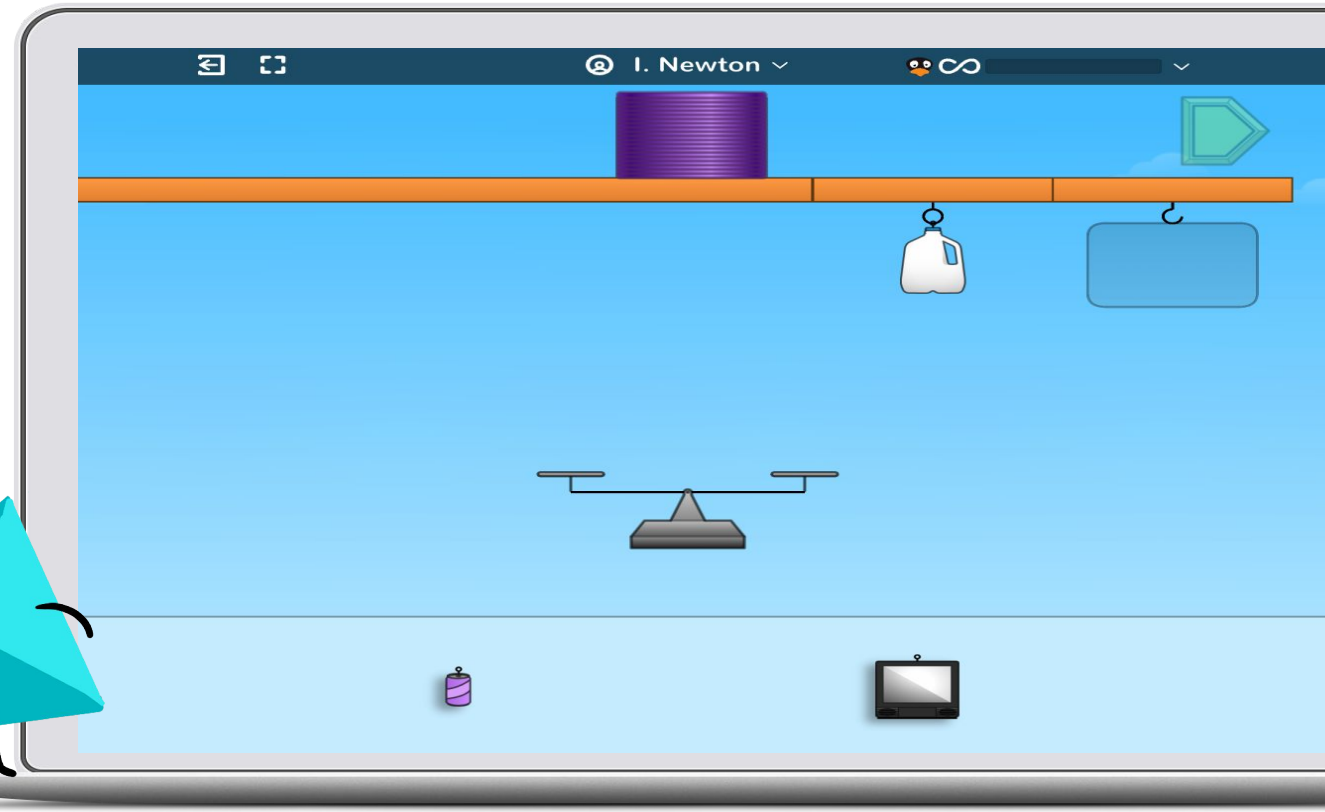
# New to ST Math?

Guided Intro



# Module 1 - Day 1

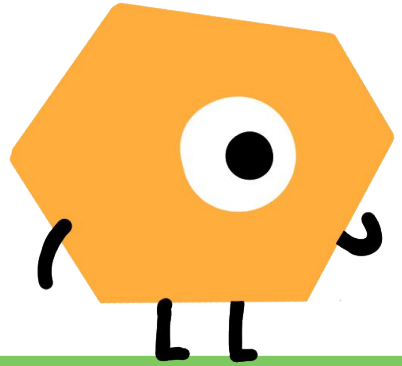
## New to ST Math?




Play the Slinky game

Module 1 - Day 1

# Share ST Math Experience!



What do you know about ST Math?

What do you like about ST Math?

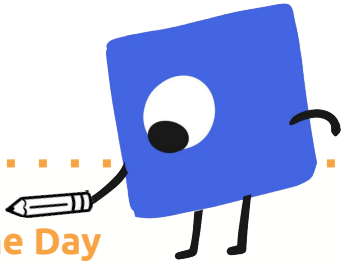
What is your favorite ST Math game? Why?

One ST Math tip I have is . . .

A question I have is . . .

My ST Math Goal is . . .

I'm wondering about . . .

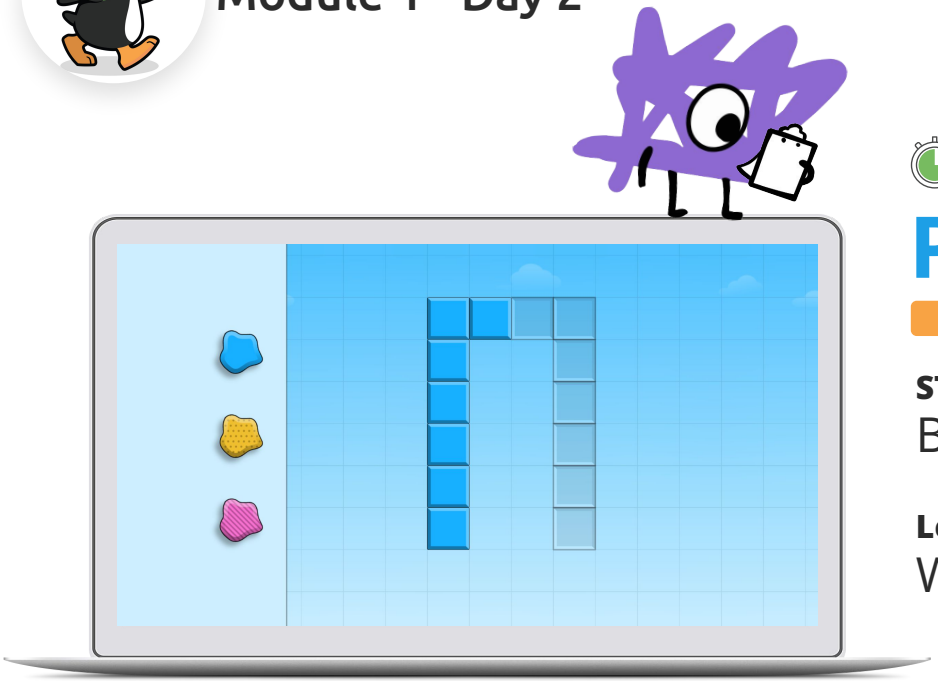


## Problem of the Day

# Create a class “Getting to Know Our Class” chart.

Module 1 - Day 2

Puzzle Talk



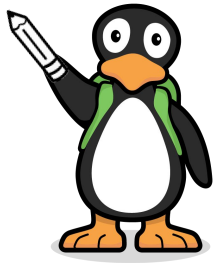
Time for

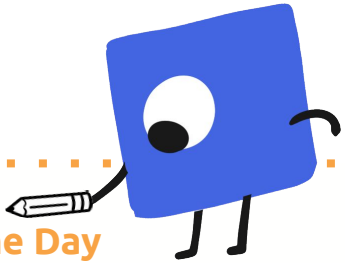
# PROBLEM SOLVING!

**ST Math Puzzle:**
Big Seed > Level 1

**Learning Objective:**
What do you know about ST Math?

Puzzle Link





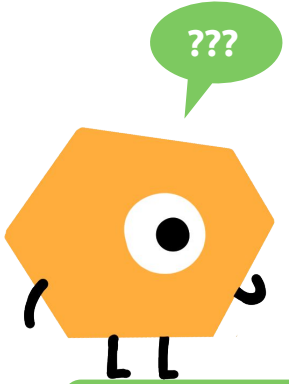
## Problem of the Day

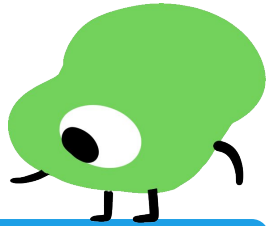
Describe the class mathematically.

Module 1 - Day 3

My Thinking Path

# Topic: Solve problems involving comparing fractions



What I know about comparing fractions is...

What I know about ordering fractions is...

One thing I learned is . . .

A question I have is . . .

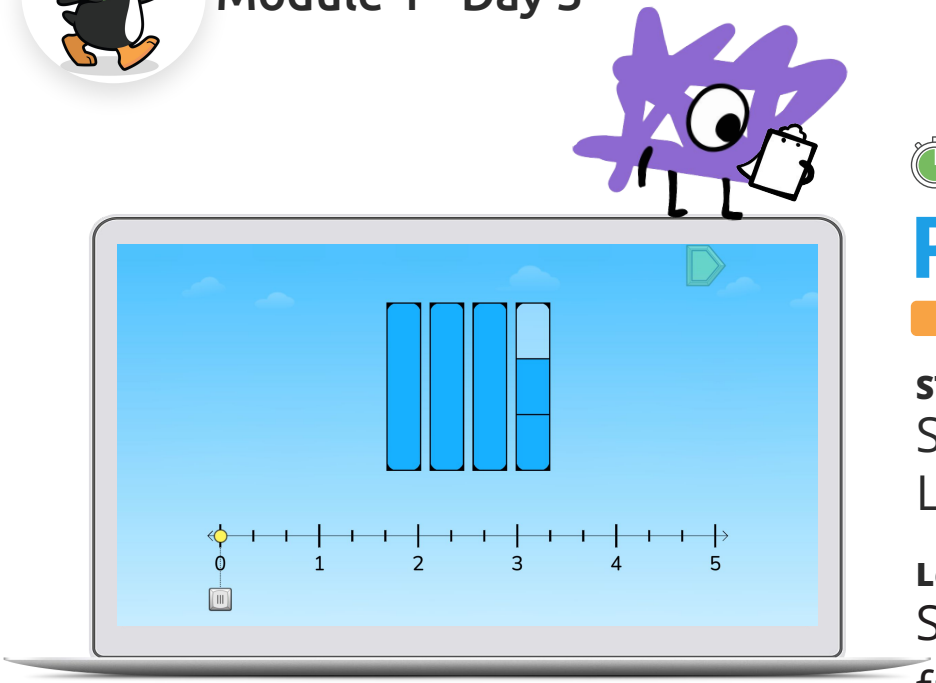
This is like...

This is not like....

I wonder...

Module 1 - Day 3

Puzzle Talk



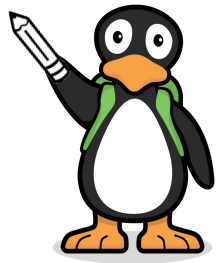

Puzzle Link

Time for

# PROBLEM SOLVING!

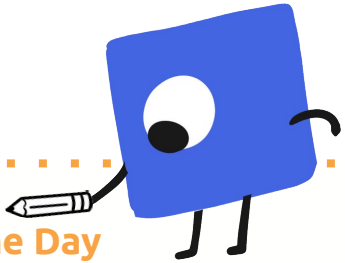
**ST Math Puzzle:**
Scale Fraction Addition and Subtraction> Level 2

**Learning Objective:**
Solve problems involving comparing fractions, including ordering on a number line



Module 1 - Day 3

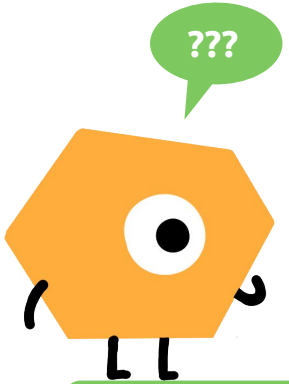
Problem Solving

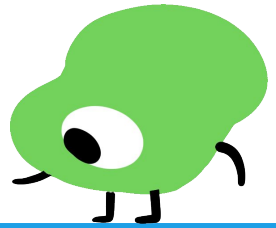


## Problem of the Day

Create a bar model of a scale fraction with fourths.
Use Cuisenaire rods, connecting cubes or paper strips to create your bar model.
Build a number line from 0 to 3 using your bar model.
Include fractions from halves, fourths, and eighths up to 3.

# My Thinking Path



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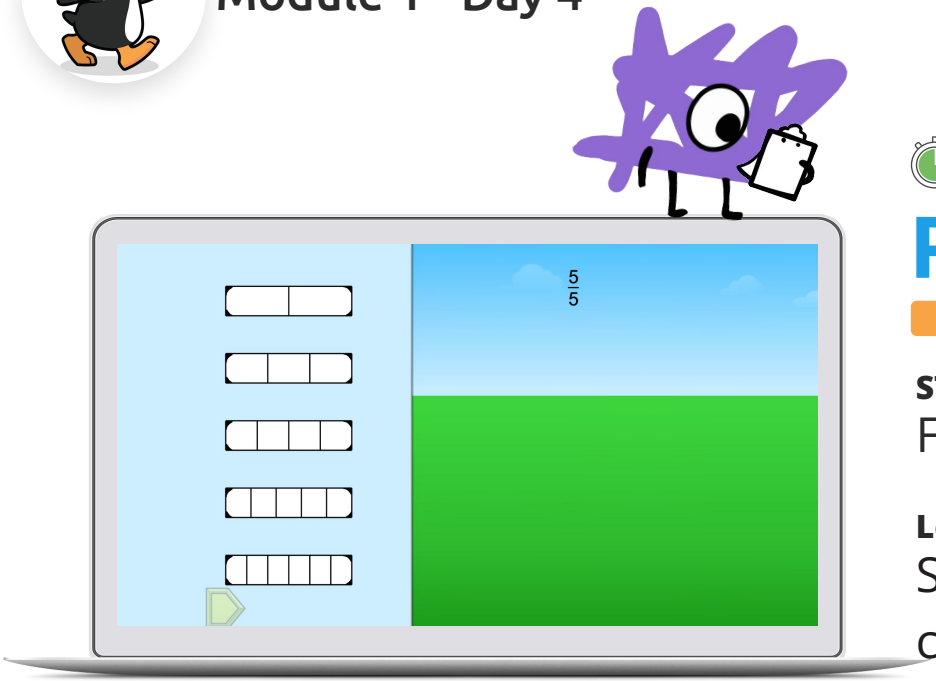
Module 1 - Day 4

Puzzle Talk



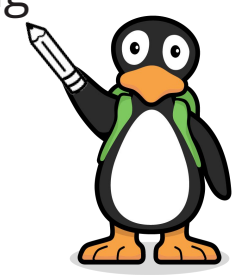

Puzzle Link

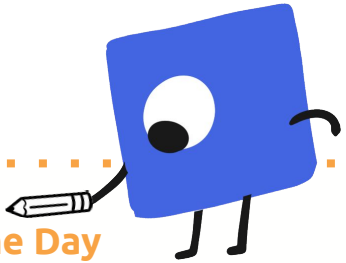
Time for

# PROBLEM SOLVING!

**ST Math Puzzle:**
Fraction Bricks > Level 1

**Learning Objective:**
Solve problems involving comparing fractions, including ordering on a number line





## Problem of the Day

Kyle and Juan each had the same size chocolate bar. Kyle cut his into 6 equal size pieces and gave 2 pieces to Carla. Juan cut his bar into 3 equal size pieces and gave 1 piece to Carla.

Compare how much chocolate bar each friend has.

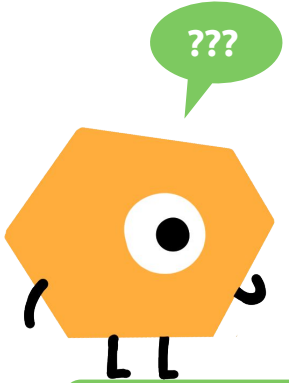
Module 2

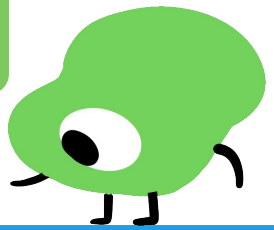
Can’t wait to see what we do!

Module 2 - Day 1

# My Thinking Path

## Topic: Comparing Fractions and Understanding Equivalence



What I know about comparing fractions is...

What I know about equivalent fractions is...

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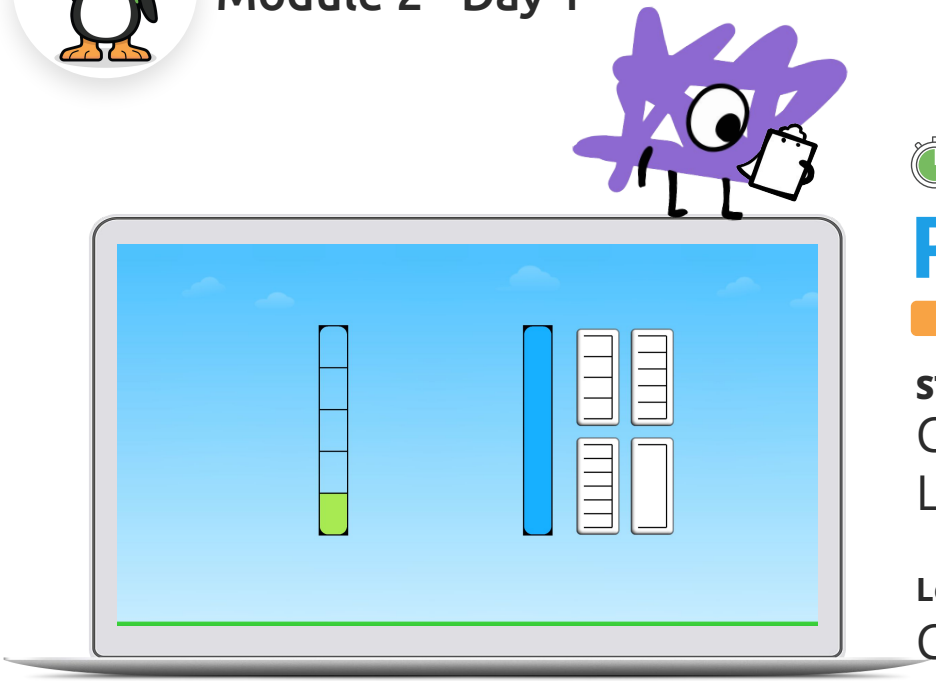
Module 2 - Day 1

Puzzle Talk



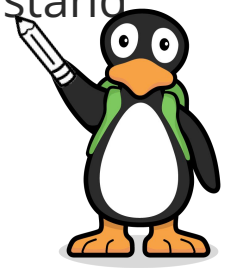
Time for

# PROBLEM SOLVING!

**ST Math Puzzle:**
Common Denominator with Fractions > Level 1

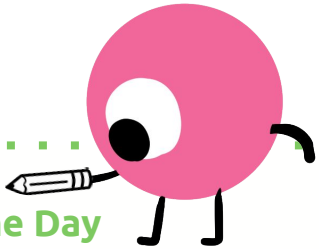
**Learning Objective:**
Compare fractions and understand equivalence

Puzzle Link







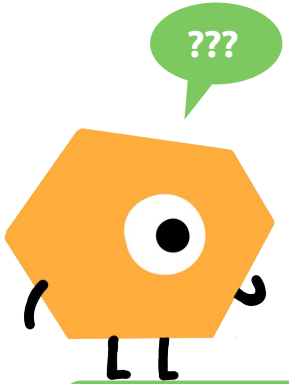


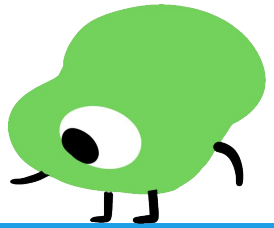
## Problem of the Day

Jana and Deklan each brought the same size pan of brownies for the class party. Jana cut her brownie into 4 equal size pieces. Deklan cut his brownie into 3 equal sized pieces. They needed to give 24 students the same size piece.

How could they do this with their two pans of brownies?

# My Thinking Path



What I know about comparing fractions is...

What I know about equivalent fractions is...

One thing I learned is . . .

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This is like...

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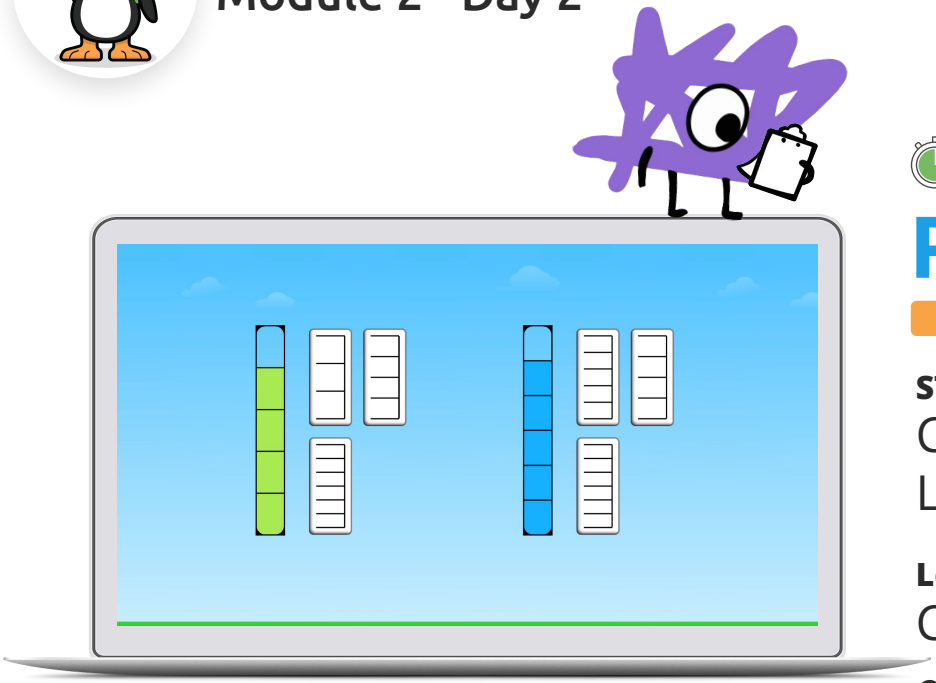
I wonder...

Module 2 - Day 2

Puzzle Talk



Time for

# PROBLEM SOLVING!

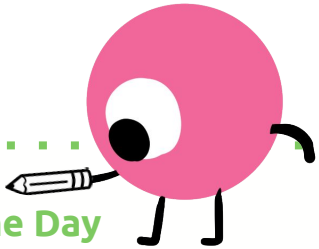
**ST Math Puzzle:**
Common Denominator with Fractions > Level 4

**Learning Objective:**
Compare fractions and understand equivalence

Puzzle Link





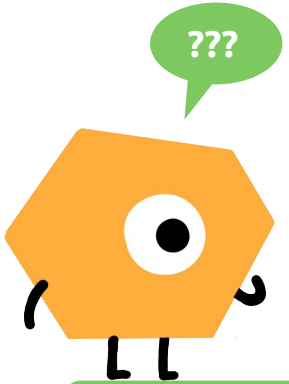


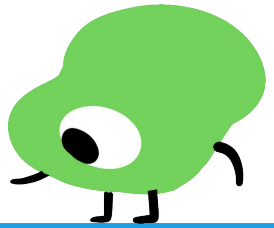
## Problem of the Day

Howard and Imani were in charge of dividing the clay for their table in Art class. Each table had 4 students. Howard divided the clay into 4 equal sized pieces. Imani divided the clay into 8 equal sized pieces. Both tables fair shared all of their clay. Compare and contrast the clay students at each table received.

Module 2 - Day 3

# My Thinking Path



What I know about comparing fractions is...

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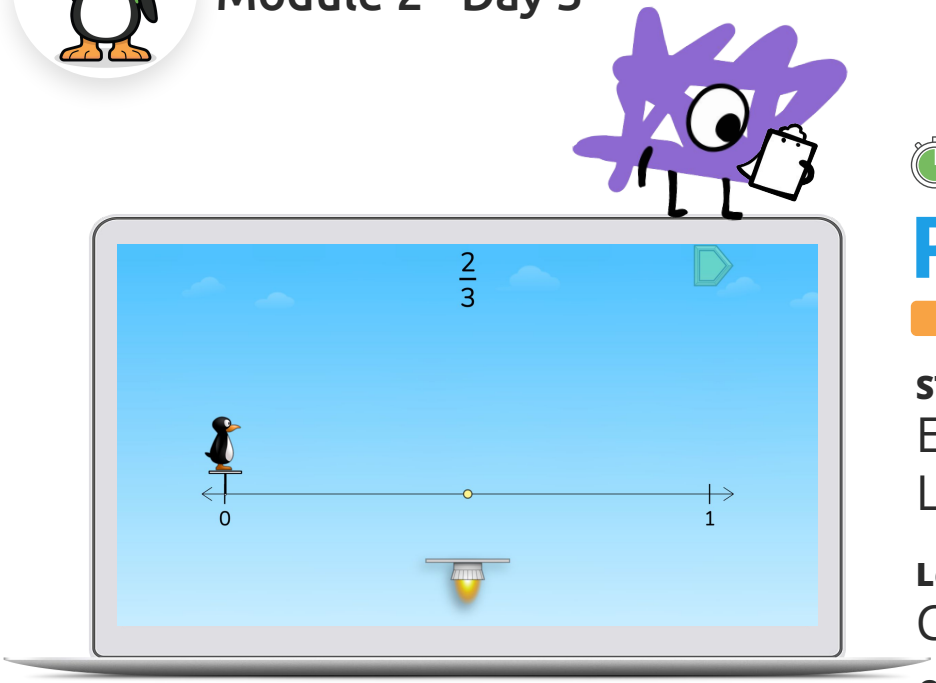
Module 2 - Day 3

Puzzle Talk



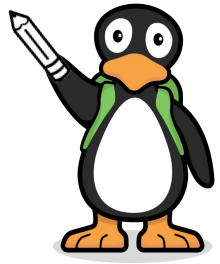

Puzzle Link

Time for

# PROBLEM SOLVING!

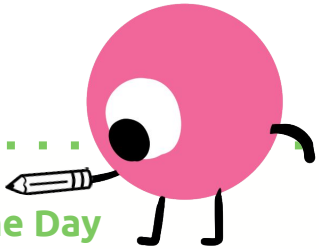
**ST Math Puzzle:**
Estimate Fractions on a Number Line > Level 2

**Learning Objective:**
Compare fractions and understand equivalence



Module 2 - Day 3

## Problem Solving



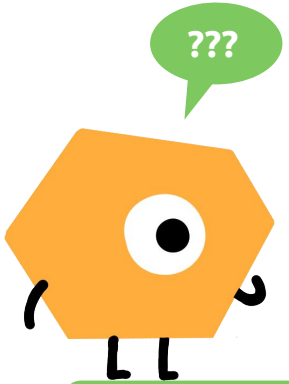
### Problem of the Day

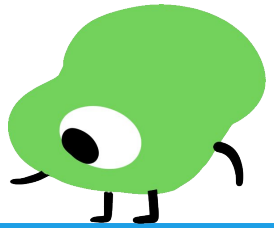
Draw a number line. Place the following fractions 3/6, 7/8, 11/12, 8/6, 1/8, 3/4, 25/12, 6/3, 6/12, 6/5, 3/5, and 14/8 on the number line.

Select three of the fractions you placed on the number line and explain how you determined where to place these fractions. Challenge yourself.

Module 2 - Day 4

# My Thinking Path



What I know about comparing fractions is...

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This is like...

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Module 2 - Day 4

Puzzle Talk

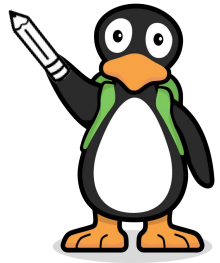

Time for

# PROBLEM SOLVING!

**ST Math Puzzle:**
Fraction Order Fill > Level 1

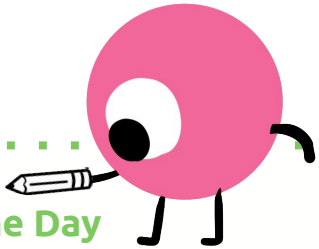
**Learning Objective:**
Compare fractions and understand equivalence

Puzzle Link



Module 2 - Day 4

Problem Solving



## Problem of the Day

Isabella baked a pan of lasagna for her family of 4. She cut the lasagna into eight equal pieces. Explain how much lasagna each family member might eat. Write equations/inequalities to compare how much each family member ate. Find at least 3 different ways the family could share the lasagna.

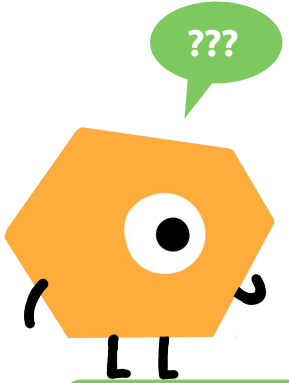
Module 3

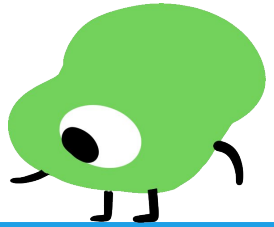
Learning math carefree!

Module 3 - Day 1

# My Thinking Path

## Topic: Adding and Subtracting Fractions



What I know about adding fractions is...

What I know about subtracting fractions is...

One thing I learned is . . .

A question I have is . . .

This is like...

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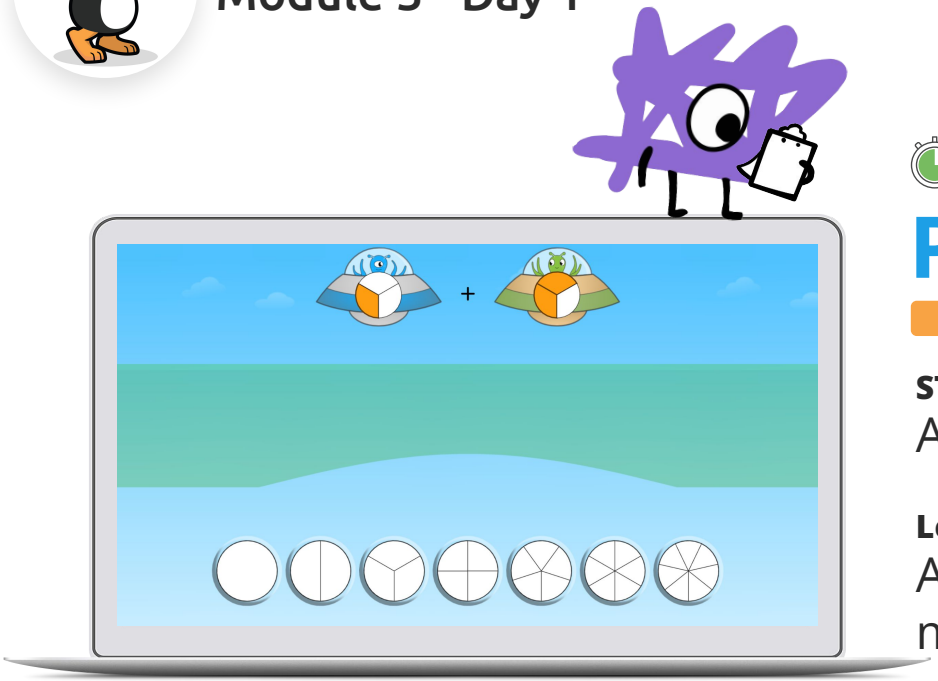
Module 3 - Day 1

Puzzle Talk



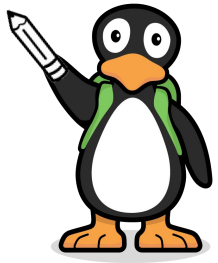
Time for

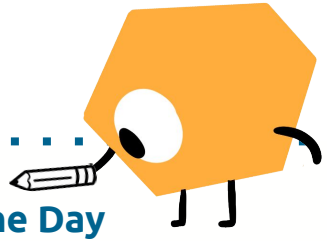
# PROBLEM SOLVING!

**ST Math Puzzle:**
Alien Bridge > Level 1

**Learning Objective:**
Add and subtract fractions and mixed numbers

Puzzle Link



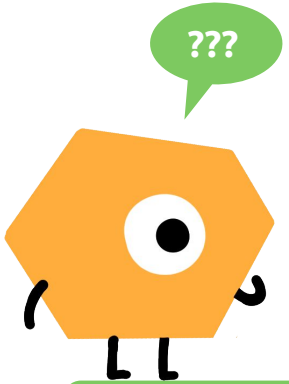


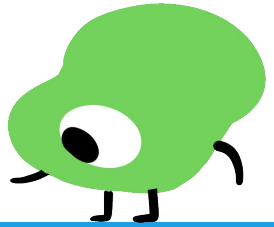
## Problem of the Day

Keyton wanted to make 2 gallons of punch to take to the school picnic. He found a recipe that called for 3/4 gallon of fruit punch, 2 quarts of orange juice, 3 quarts of lime soda, and 3/4 gallon of water.

If Keyton makes this recipe, will he have as much punch as he wants? Justify your solution.

# My Thinking Path



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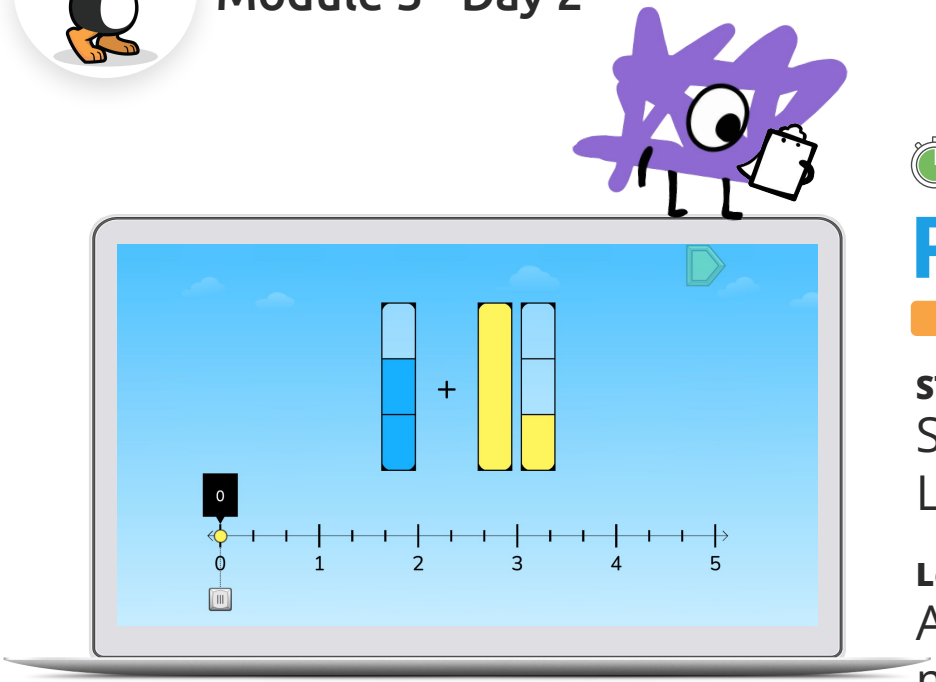
Module 3 - Day 2

# Puzzle Talk




Puzzle Link

Time for

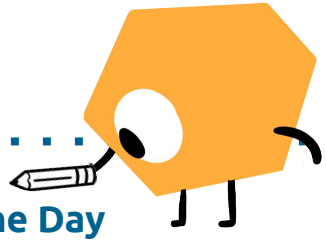
# PROBLEM SOLVING!

**ST Math Puzzle:**
Scale Fraction Addition and Subtraction > Level 1

**Learning Objective:**
Add and subtract fractions and mixed numbers

Module 3 - Day 2

## Problem Solving

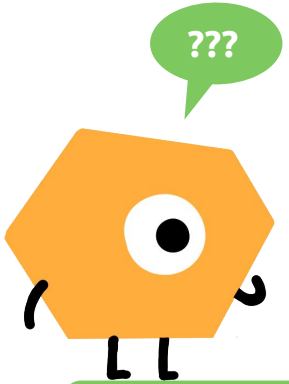


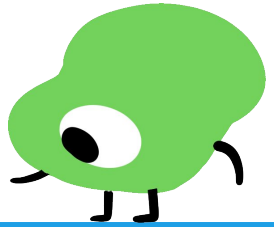
### Problem of the Day

Fill in the blank with the correct symbol (i.e., >, <, =) for this equation/inequality: 3/6 + 4/6 ____ 2/3 + 2/3.

Explain how you determined the symbol to use. Then use a number line to compare these two addition Expressions.

# My Thinking Path



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Module 3 - Day 3

Puzzle Talk

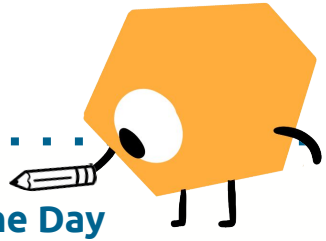

Puzzle Link

Time for

# PROBLEM SOLVING!

**ST Math Puzzle:**
JiJi Cycle Select Basket > Level 1

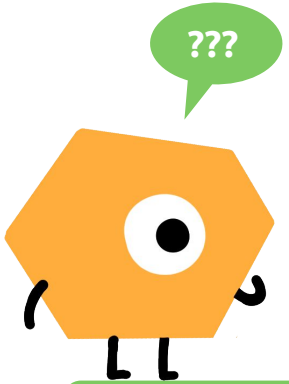
**Learning Objective:**
Add and subtract fractions and mixed numbers

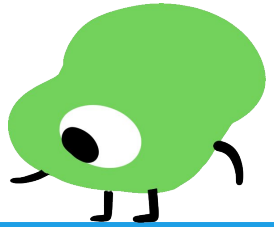


## Problem of the Day

Joan and Brett were decorating picture frames for a class store project. They needed 3_1/4 feet of ribbon to decorate all their frames. Joan had 2_1/2 feet of ribbon but used 3/4 of a foot of her ribbon for another project. Brett had 2_3/4 feet of ribbon but used 5/4 of a foot of his ribbon for another project. Do they have enough ribbon for their project? Justify your solution.

# My Thinking Path



What I know about adding fractions is...

What I know about subtracting fractions is...

One thing I learned is . . .

A question I have is . . .

This is like...

This is not like....

I wonder...

Module 3 - Day 4

Puzzle Talk

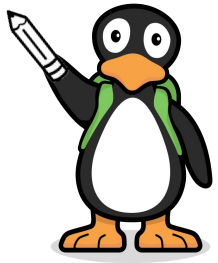
Puzzle Link

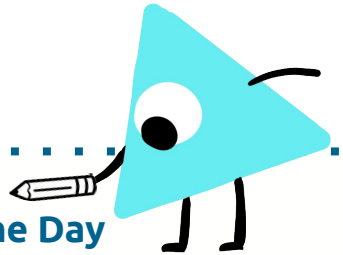
Time for

# PROBLEM SOLVING!

**ST Math Puzzle:**
Pie Monster > Level 1

**Learning Objective:**
Add and subtract fractions and mixed numbers





## Problem of the Day

Iris and her brother needed 2_1/2 bags of popcorn kernels to make enough popcorn to sell at the school bake sale. Iris had 1_1/4 bags and her brother had 1_3/8 bags.

Do they have enough bags of popcorn kernels? Explain how you know.

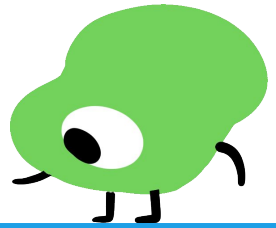
Module 4

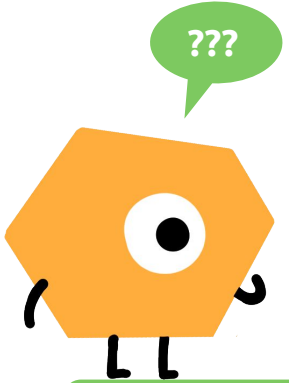
Let’s learn some more!

Module 4 - Day 1

# My Thinking Path

**Topic: Adding and Subtracting Fractions and Mixed Numbers**






**What I know about adding fractions and mixed numbers is...**

**What I know about subtracting fractions and mixed numbers is...**

**One thing I learned is . . .**

**A question I have is . . .**

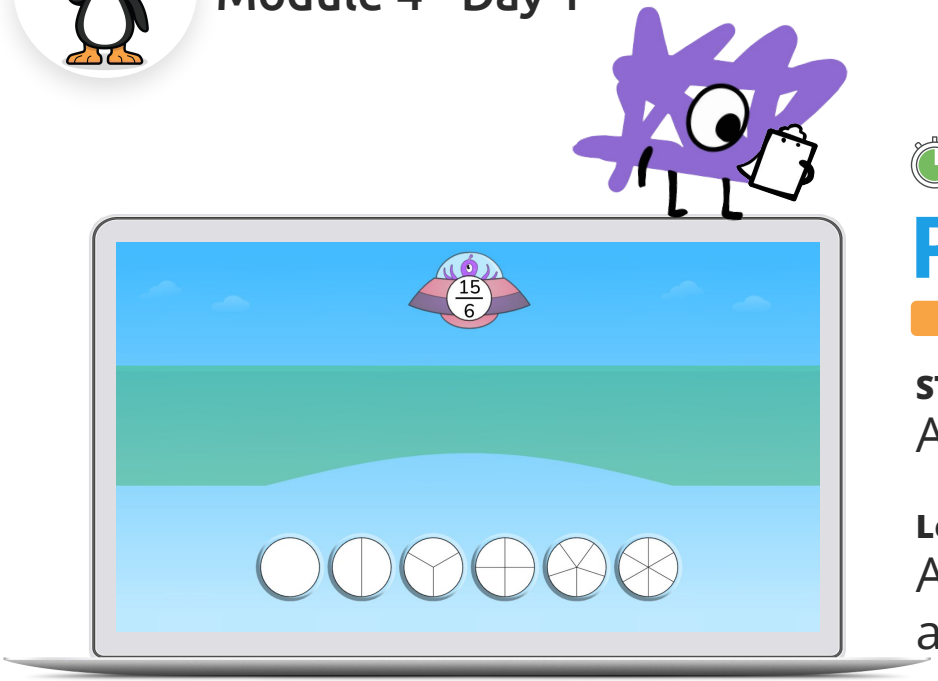
**This is like...**

**This is not like....**

**I wonder...**

Module 4 - Day 1

Puzzle Talk



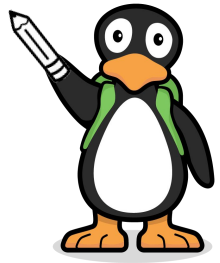

Time for

# PROBLEM SOLVING!

**ST Math Puzzle:**
Alien Bridge Symbolic > Level 3

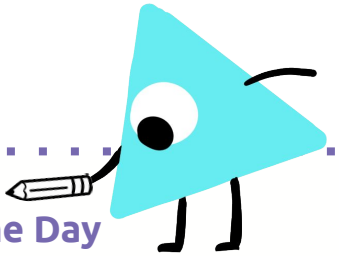
**Learning Objective:**
Adding and subtracting fractions and mixed numbers

Puzzle Link









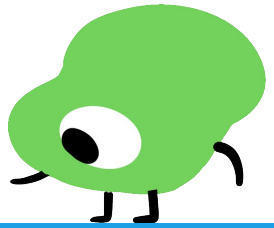
## Problem of the Day

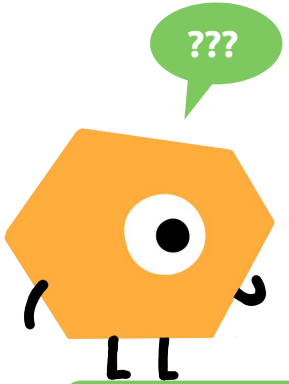
Erica needs 2 ½ yards of material to make a blanket. She found 1 6/8 of red cloth and 4/8 of blue cloth.

Does she have enough to make the blanket?

Module 4 - Day 2

# My Thinking Path



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One thing I learned is . . .

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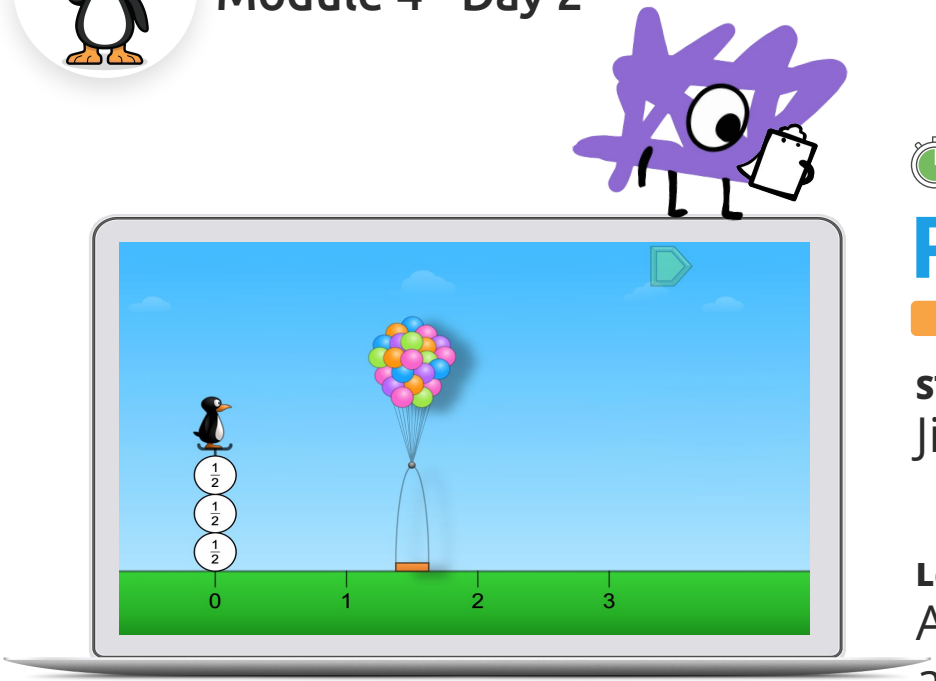
Module 4 - Day 2

Puzzle Talk




Puzzle Link

Time for

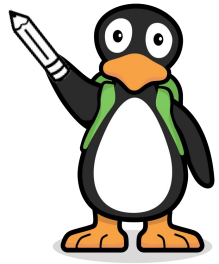
# PROBLEM SOLVING!

**ST Math Puzzle:**

JiJi Cycle Select Basket Symbolic > Level 1

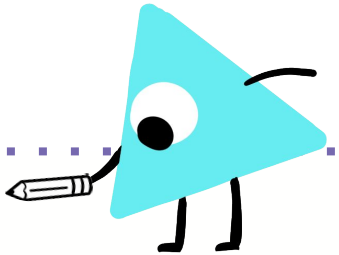
**Learning Objective:**

Adding and subtracting fractions and mixed numbers









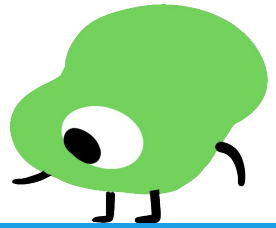
## Problem of the Day

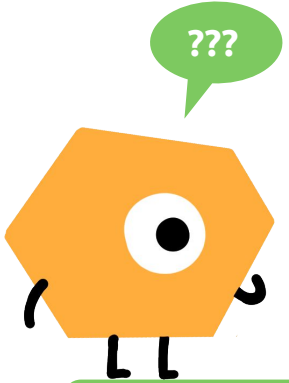
Demarius made pizza for his family. He gave ⅜ of the pizza to his mom, ⅛ of the pizza to his sister and he ate the rest himself.

Who ate more pizza Demarius or his family?

Module 4 - Day 3

# My Thinking Path






What I know about adding fractions and mixed numbers is...

What I know about subtracting fractions and mixed numbers is...

One thing I learned is . . .

A question I have is . . .

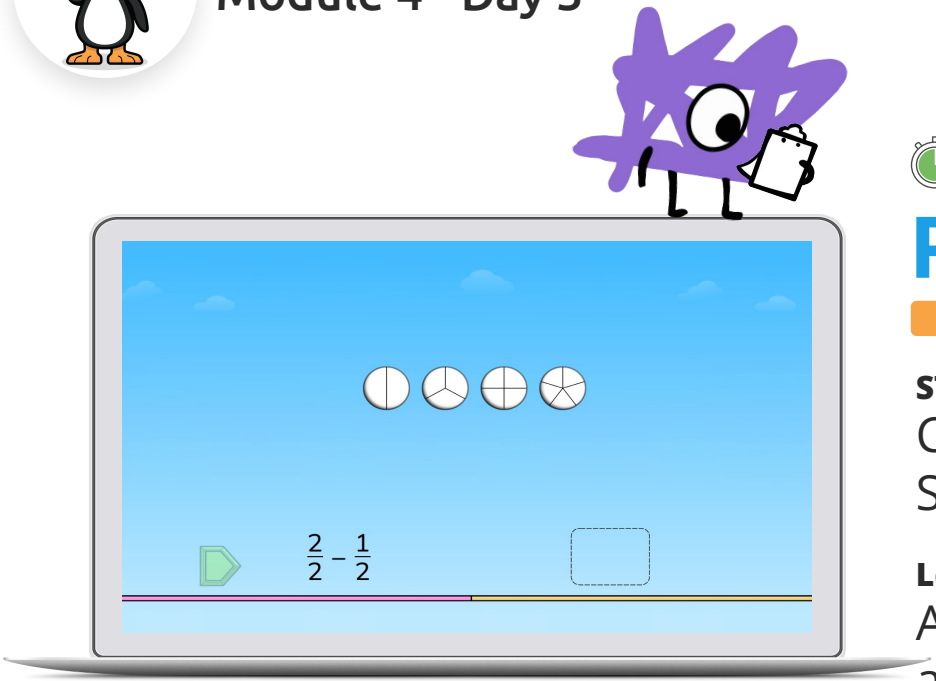
This is like...

This is not like....

I wonder...

Module 4 - Day 3

Puzzle Talk



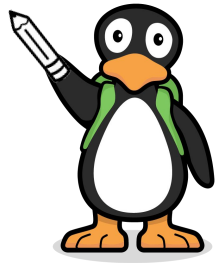

Puzzle Link

Time for

# PROBLEM SOLVING!

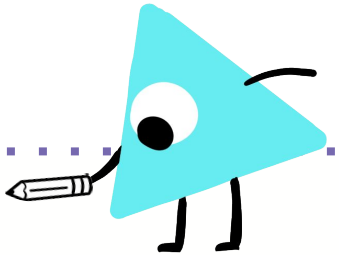
**ST Math Puzzle:**
Crank Pies Addition and Subtraction
Symbolic > Level 1

**Learning Objective:**
Adding and subtracting fractions and mixed numbers









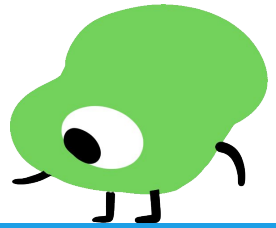
## Problem of the Day

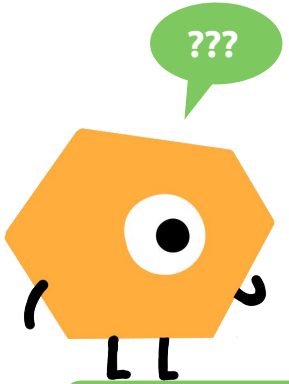
Carlos drinks 2/6 cup of milk at breakfast and again at lunch. At dinner Carlos drinks 4/6 cup of milk.

How much milk does Carlos drink in 1 day? Explain how you know.

Module 4 - Day 4

# My Thinking Path






What I know about adding fractions and mixed numbers is...

What I know about subtracting fractions and mixed numbers is...

One thing I learned is . . .

A question I have is . . .

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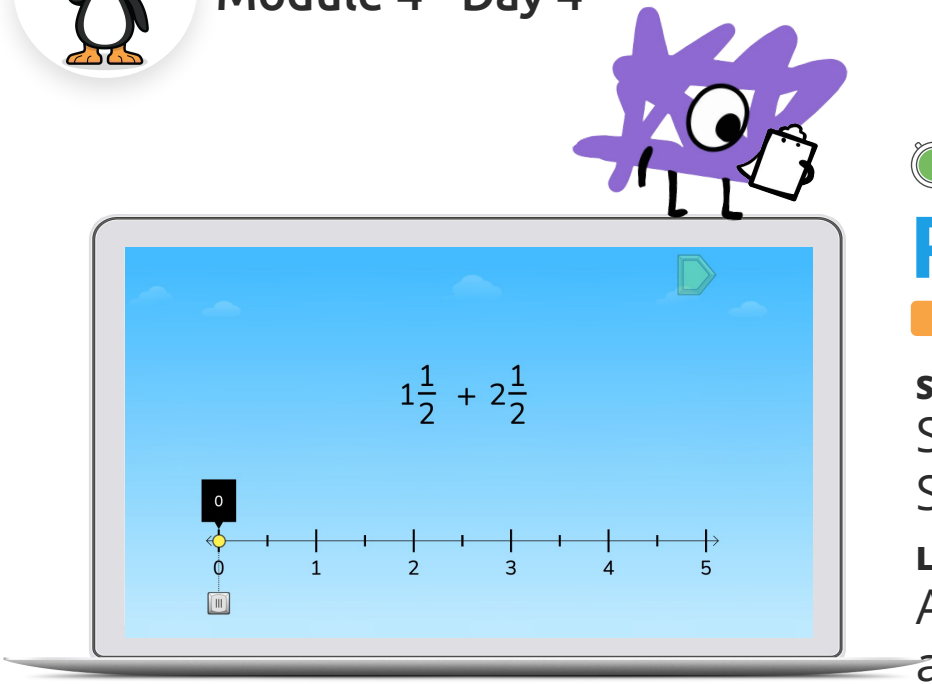
Module 4 - Day 4

Puzzle Talk




Time for

# PROBLEM SOLVING!

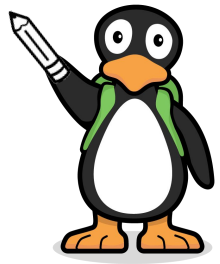
**ST Math Puzzle:**

Scale Fraction Addition and Subtraction Symbolic > Level 1

**Learning Objective:**

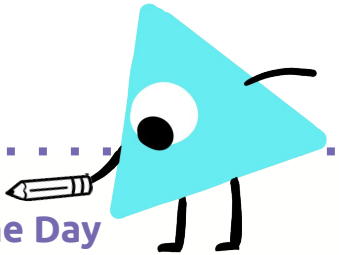
Adding and subtracting fractions and mixed numbers

Puzzle Link





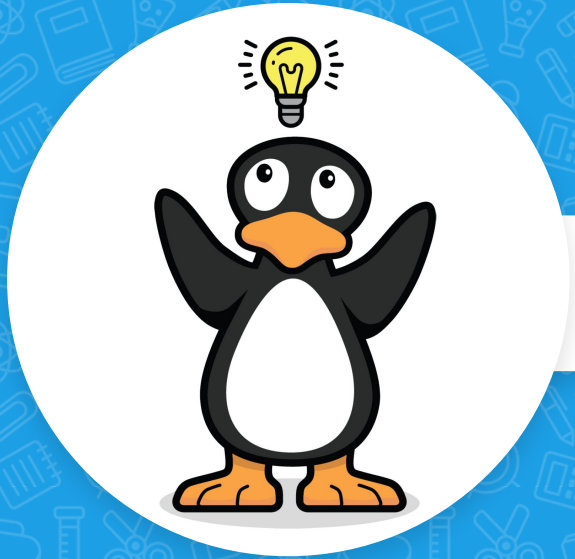




## Problem of the Day

Bev is knitting a scarf for her mother. She knits 4/3 of a foot on Monday, ⅔ of a foot on Tuesday and 1 ⅔ of a foot on Wednesday.

Bev thinks she has knitted 4 feet of her scarf. Is she correct? How do you know?



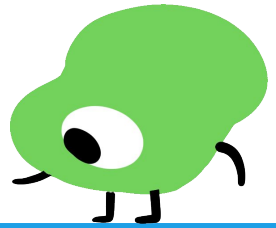
# Module 5

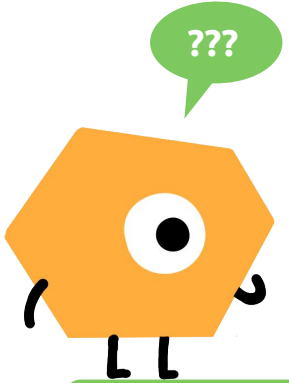
Let’s see math come alive!

Module 5 - Day 1

# My Thinking Path

## Topic: Write and compare decimal fractions






What I know about decimal fractions is...

What I know about comparing decimal fractions is...

One thing I learned is . . .

A question I have is . . .

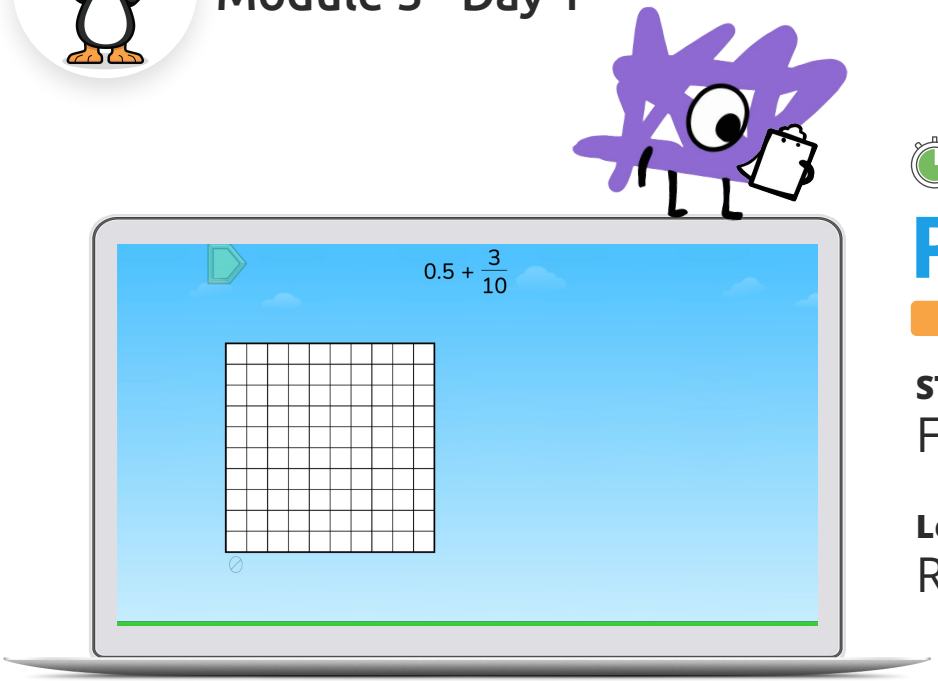
This is like...

This is not like....

I wonder...

Module 5 - Day 1

Puzzle Talk



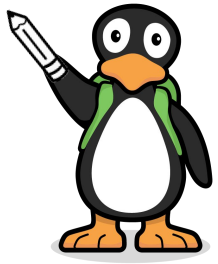

Puzzle Link

Time for

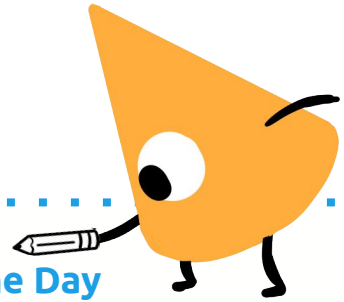
# PROBLEM SOLVING!

**ST Math Puzzle:**
Fractions and Decimals Grid > Level 1

**Learning Objective:**
Represent decimal fractions



Module 5 - Day 1



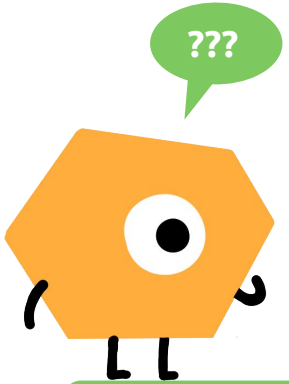
## Problem Solving

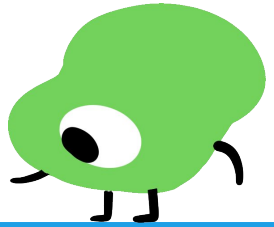
### Problem of the Day

Barry had $4.00. He earned $2.75 a day for 5 days taking care of his neighbor's dog. How much money does he have now? Use a number line to show how much money Barry has now.

Module 5 - Day 1

# My Thinking Path



What I know about decimal fractions is...

What I know about comparing decimal fractions is...

One thing I learned is . . .

A question I have is . . .

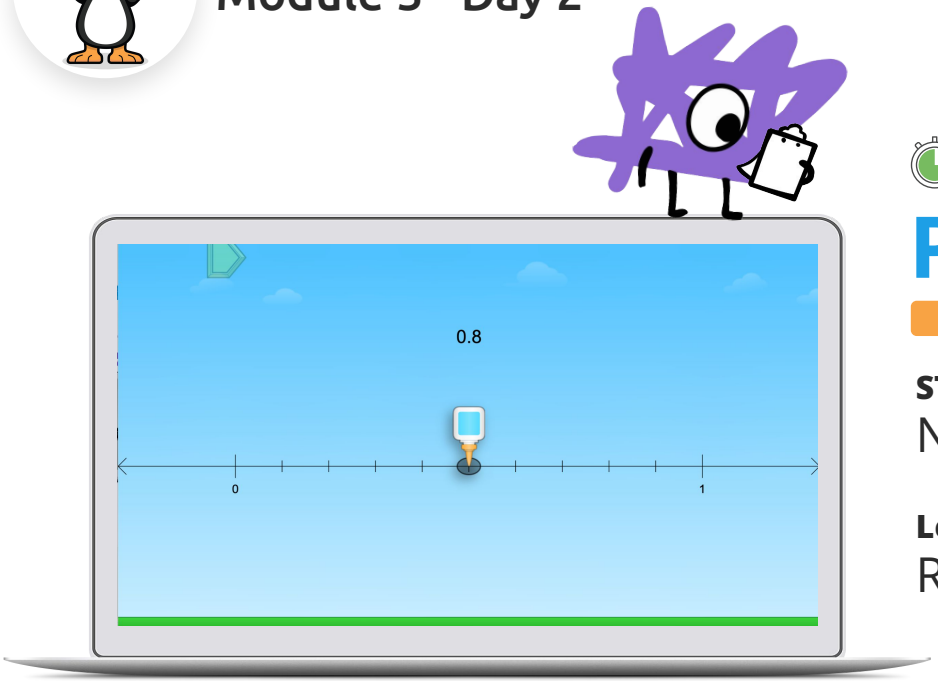
This is like...

This is not like....

I wonder...

Module 5 - Day 2

Puzzle Talk



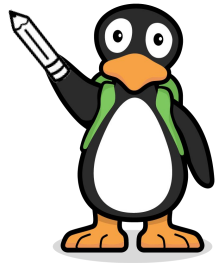

Puzzle Link

Time for

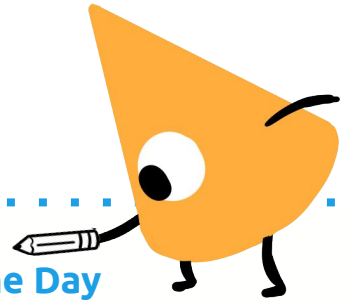
# PROBLEM SOLVING!

**ST Math Puzzle:**
Number Line Trap > Level 1

**Learning Objective:**
Represent decimal fractions



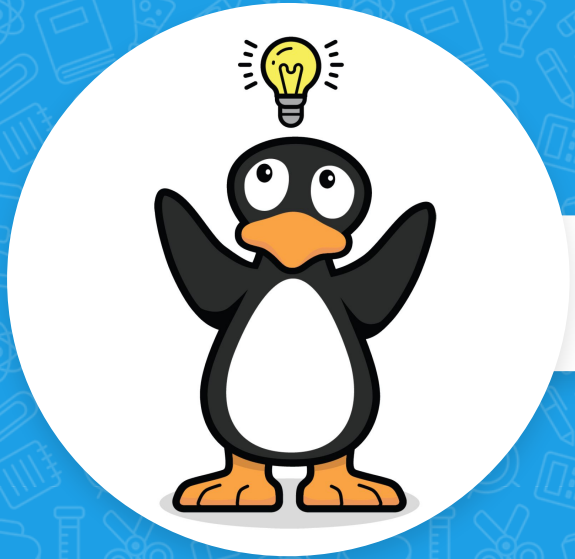
Module 5 - Day 2



Problem Solving

## Problem of the Day

Loretta keeps time for each lap she runs around a track. The first lap she ran in 1.83 minutes. The second lap she ran in 1.9 minutes. She ran for three laps. Her total time for the three laps was 4.48minutes. How long was her third lap?



# Reflection Poster

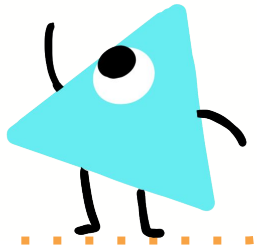
Slides 62-63

Time for

# REFLECTION!

## LET'S BRAINSTORM

- ★ What math concepts did you learn this summer?
- ★ What new vocabulary did you learn?
- ★ What strategies did you use when you got stuck?
- ★ How did you become a better mathematician?



Time for

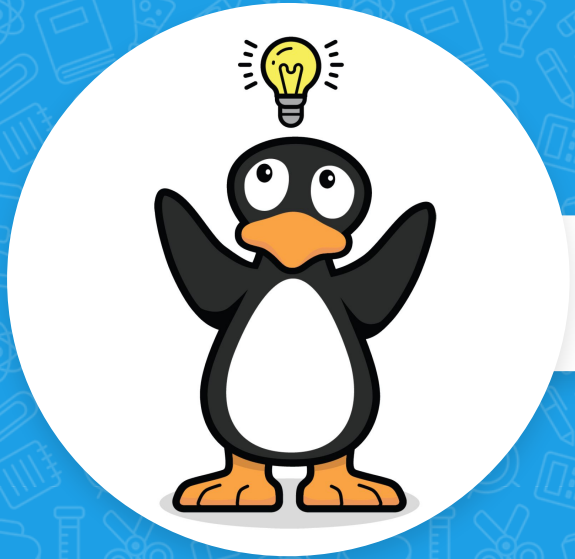
# REFLECTION!

## DESIGN A REFLECTION POSTER

### Share what you know!

- ★ What math concepts did you learn this summer?
- ★ What new vocabulary did you learn?
- ★ What strategies did you use when you got stuck?
- ★ How did you become a better mathematician?

Make your poster
**colorful**, **interesting** and **informative**.



# Mini Math Game Design

Use Slides 65-69 if using the 4-Day Immersion Program

# MINI MATH GAME DESIGN

We are going to create a game like the ones you played this summer!


Let's Brainstorm!

**What are some games you know?**

**Can you think of how you might put math in the game?**

**Can you think of a game you would like to make that is like the ones you know?**


Your New Game

## When you make a new game, what math concepts can you include?

___ *addition*
___ *subtraction*
___ *shapes*
___ *money*
___ *puzzles*
___ *time*
___ *measuring*
___ *estimation*
___ *place value*
___ *something else?*

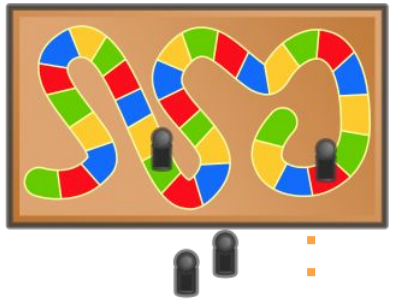
MINI
MATH GAME
DESIGN

Your New Game

## Can you make a game to teach or practice a math concept?

- ★ What is your game called?
- ★ How many players can you have?
- ★ What are the directions and rules for your game?

MINI
MATH GAME
DESIGN



## Now it's time to make a new game!

Work together to make a game that your friends will want to play.

# Learning Showcase and Celebration Slides

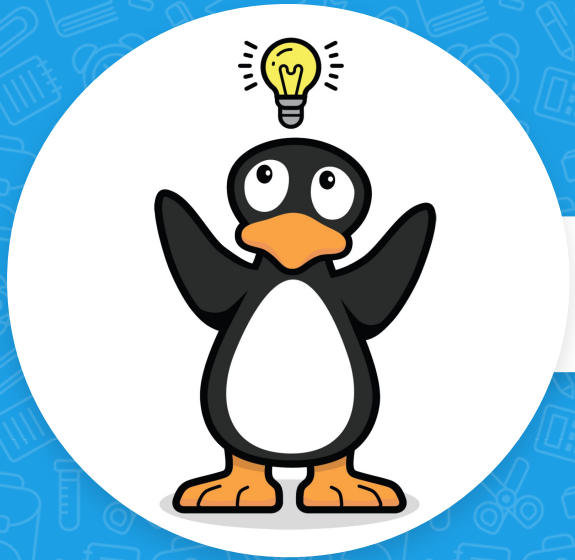
# Welcome to

ST Math Immersion's

# Learning Showcase & Celebration!

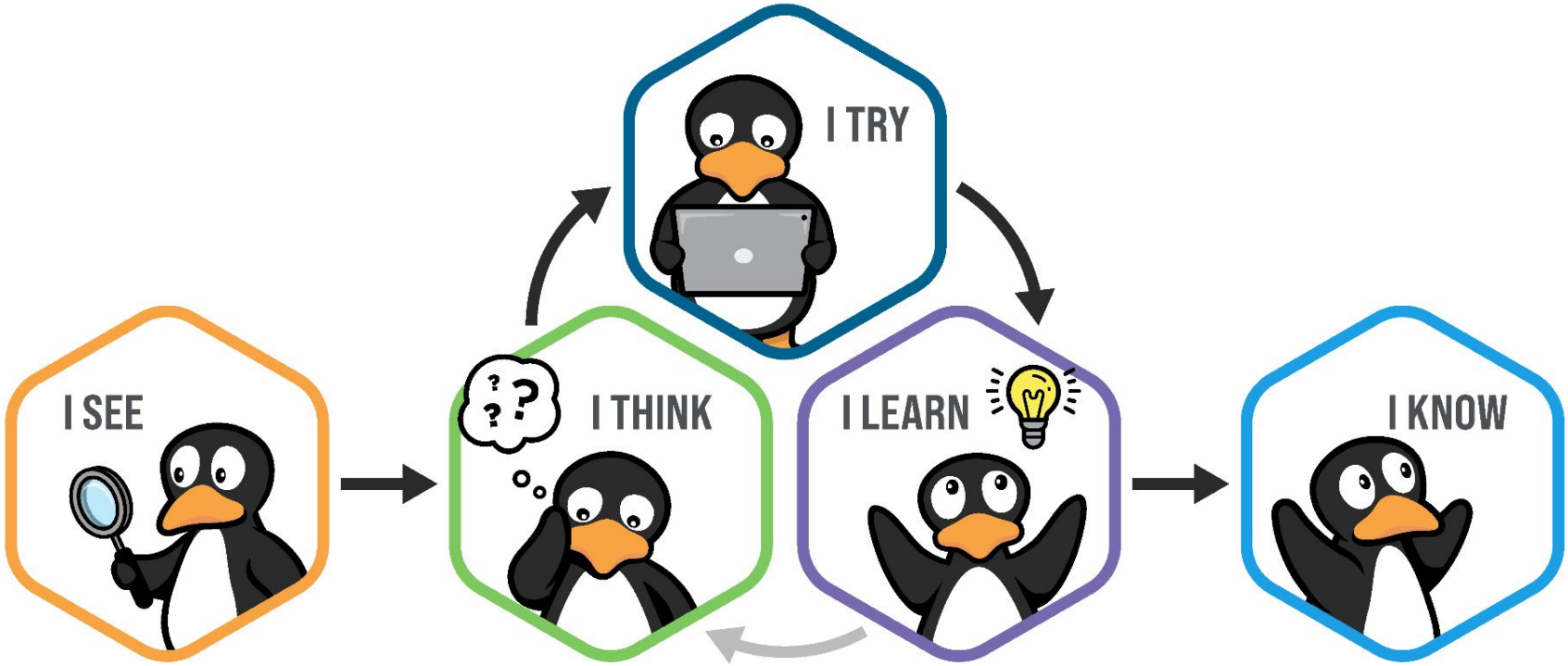
# AGENDA (Sample)

10:00 am - Welcome
Gallery Walk of Posters
10:15 am - Presentation
10:30 am - Debriefing Time
11:00 am - Game Time
11:30 am - End Time



Resource

# Problem Solving Process



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