



Warm-Up

Cooking and baking are full of science and math!

Today, you'll be learning how ingredients and mixing change texture — and how to see fractions in something delicious.

Grab your pencil, get ready to observe, and don't be afraid to get a little messy!

Part 1: Mashed Potato Mixing Lab (Younger Learners)

Explore how ingredients and mixing change texture.

1. Label your bowls A, B, and C.

Write what you'll do in each:

- Bowl A: _____
- Bowl B: _____
- Bowl C: _____

2. Make a prediction!

Which bowl will make the smoothest mashed potatoes?

 My guess: _____

3. Mash and observe.

Taste a small spoonful of each bowl.

Circle the words that match the texture you feel:

Texture	☐	☐	☐
Smooth	☐	☐	☐
Lumpy	☐	☐	☐
Creamy	☐	☐	☐
Sticky	☐	☐	☐
Fluffy	☐	☐	☐
Stretchy	☐	☐	☐

4. Which bowl tasted best? _____
5. What do you think made the difference? _____

 Draw your favorite mashed potatoes below!

What color or texture did they have?



Part 2: Advanced Potato Scientists (Older Learners)

Test your ideas, record data, and explain why things changed.

1. Fill in your test setup:

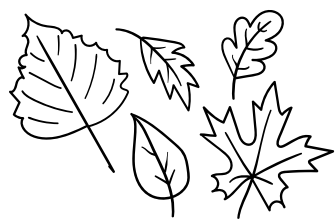
Bowl	What I Changed	What I Noticed	Texture Notes
A			
B			
C			

2. Answer the questions:

- Which bowl was the fluffiest? Why do you think that happened?
- Which bowl became sticky or gluey? Why?
- What role did butter or milk play in the texture?

3. **Science Reflection:** When we mash potatoes, we break open starch molecules. Too much mixing releases more starch, making potatoes gluey. Butter and milk coat starch and help keep things creamy.

 In your own words, explain why one batch turned out better:



Part 3: Pumpkin Pie Geometry (Younger Learners)

Learn fractions by slicing and sharing!

1. A whole pie = 1 whole.

Draw a circle to show your pie: 



2. Cut your pie into 2 pieces.

How many halves make a whole?

 _____ + _____ = 1 whole

3. Now cut each half in half again.

How many quarters make a whole?

 _____ + _____ + _____ + _____ = 1 whole

4. Color or label your pie slices:

$\frac{1}{2}$  $\frac{1}{4}$  $\frac{1}{8}$ 

5. If you share your pie with 3 friends, and there are 8 slices,

 How many slices does each person get? _____

6. What fraction of the pie is left if one person eats $\frac{1}{4}$? _____

 Draw your pie below and label the fractions!



+ Part 4: Advanced Pie Math (Older Learners)

Explore fraction equivalence and fair sharing.

1. Cut your pie into 8 equal slices.

How many eighths make 1 whole? _____

2. Color or shade in 4 slices.

What fraction of the pie did you color? _____

👉 Write two ways to show it:

_____ = _____

3. Write a fraction sentence:

"If I eat 2 slices out of 8, I ate _____ of the pie."

4. Fraction Challenge:

You have 2 pies, each cut into 8 slices.

If your family eats 10 slices total, how many pies are left? _____

5. Which is bigger — $\frac{3}{8}$ of a pie or $\frac{1}{2}$ of a pie?

Circle one: $\frac{3}{8}$ | $\frac{1}{2}$

6. Sweet Reflection:

How does slicing pie help us understand fractions?

Bonus Challenge: Design Your Own Pie!

Invent a new flavor, name it, and divide it into fractions any way you like.

Pie Name: _____

Number of slices: _____

Each slice = _____ fraction of the pie

🎨 Draw and label your pie below!

