

Dinosaur Pie

This is a story that can be used to introduce the ideas of repartitioning and chunking to get equivalent fractions.

Materials:

Each student needs a circle (about 8" in diameter) and a pair of scissors.

Instructions:

Read the poem to students, pausing along the way for students to make appropriate cuts to their pies. Note that the pauses should happen so that the cuts can be made before the description of the next cut is given in the story. This is by design to allow students to reason through the challenge first.

As you progress through the story and represent various fractions with the paper pies, list the fractions on the board, writing fractions of equivalent values side by side so that students can visualize the developing patterns. Specifically, highlight the fractions that Cousin Larry identifies (ie $\frac{2}{6}$ versus $\frac{1}{3}$, $\frac{3}{12}$ versus $\frac{1}{4}$, etc. Also, highlight the various ways that Sherrie and Perry share the pie ($\frac{1}{2}$, $\frac{3}{6}$, $\frac{12}{24}$).

Orchestrate a classroom discussion regarding the numerical patterns that students see regarding equivalent fractions.

Questions for further discussion or for assessment:

1. If you had to share the pie as it was at the end of the poem with 6 dinosaurs, how would you do so? What fractions could represent this?
2. Write a letter to Larry to help him understand that $\frac{2}{6}$ is the same as $\frac{1}{3}$. Include pictures

Dinosaur Pie

Sherrie and Perry were sharing a pie.
They wanted it to be fair.
They cut it in half, two pieces, same size,
And each one would just take a share.

*** pause –ask students to cut their pies to share evenly with 2 dinosaurs

But wait!!

Along came Big Larry, a cousin of Perry,
He said that he wanted some too.
So Sherrie and Perry and his cousin Larry
Thought about what they should do.

"There are three of us now so we each get one third,"
Said Sherrie, looking quite pleased.
"but the pie is cut in half, I think you'd concur,
So how will we split it for three?"

So they all sat and thought.

*** pause –ask students to cut their pies so they can share with 3 dinosaurs

"Eureka! I've got it!" Sherrie roared.

"We'll cut up each half in 3 slices, you see,
We'll further partition the parts!
Then divvy the pieces amongst us, and we
Will each have one third of the tart."

But wait!

Big cousin Larry just stared at his plate.
"You said that we'd each get a third!"
His cheeks turned bright red and he got quite irate.
"two sixths is what I've just been served!"

So Larry stomped away without eating.

***Pause—ask students to rearrange the slices so they are shared equally between 2 dinosaurs

Sherrie and Perry were sharing a pie.
They wanted it to be fair.
They each took a serving, three pieces, same size,
Three sixths would be each of their share.

But wait!

Along came Big Larry and his best friend Gary.
"I'm back with a friend to enforce
That with this pie there is equal sharing.
This time we will each get one fourth!"

They all stared at the pie.

"How shall we share this?" they wondered aloud.
"This pie is all cut up in sixths.
It doesn't split evenly for this little crowd.
We'll need to use some kind of trick."

*** pause –ask students to cut their pies and arrange the pieces so that they can be shared with 4 dinosaurs

"Eureka! I've got it" roared Sherrie.

"We'll slice up each piece into two, so there's twelve.
A number that splits into four."
She beamed with a smile, so proud of herself.
"Three slices, no less and no more."

Big cousin Larry just stared at his plate.
"A quarter is what I deserve!"
His cheeks turned bright red and he got quite irate.
"Three twelfths is what I've just been served!"

So Larry stomped away (again) without eating.

Sherrie, Perry, and Gary were sharing a pie.
They wanted it to be fair.
They each took a serving, four pieces, same size,
Four twelfths is what each one would share.

*** pause –ask students arrange the pieces so that they can be shared with 3 dinosaurs

But wait!

Big cousin Larry returned with four friends,
A calculator too, just in case,
So each of the dinosaurs looked all around.
They each knew they'd each get one eighth.

They looked at the pie, all sliced into twelfths
And wondered what now they should do.
They all looked at Sherry, so sure of herself,
And then they all knew that she knew.

*** pause –ask students to cut their pies and arrange the pieces so that they can be shared with 8 dinosaurs

"Eureka!" they all shouted with her (then waited for her to explain).

"We'll slice up each piece one more time into two,
And that gives us all twenty-four.
And eight is a factor, I know that is true.
We'll divvy the slices some more."

Three slices of pie, it all seemed so plane.
A fair share as any could be.
They all looked at Larry, they knew he'd complain.
He struggled with fractions, you see.

Big cousin Larry just stared at his plate.
"One eighth is now what I deserve!"
His cheeks turned bright red and he got quite irate.
"three twenty-fourths is what I was served!"

So Larry, he left. He took all of his friends,
Including his ol' best friend Gary.
And now the whole story is just at its end
We're left with just Sherrie and Perry.

*** pause –ask students arrange the pieces so that they can be shared with 2 dinosaurs

Sherrie and Perry were sharing a pie.
They wanted it to be fair.
They each took a serving, twelve pieces, same size,

Twelve twenty-fourths would be each of their share.

Sherrie and Perry were sharing a pie.

In the end, they just had to laugh.

Two fourths, or three sixths, or four eighths all imply:

Any way you slice it, it's just a half.

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