

Counting Sheep

Objective

Students learn about the origins of counting sheep, using counting words, design their own counting systems, use popcorn to represent sheep in various math equations, learn about a sheep's vision in relation to angles and degrees of a circle, and use popcorn to make a handprint lamb.

Background

Sheep are very gentle animals and are easily frightened. They flock together for protection because they can't really protect themselves. Sheep have many natural predators, animals that hunt and kill sheep for food. They include coyotes, wolves and domestic dogs. Sometimes larger animals, like mules or llamas, are kept in the pastures with the sheep to scare off possible predators.

The people who raise and care for sheep are called shepherds. Sometimes, shepherds have dogs to help take care of the sheep. The dog learns to round up the sheep, and when one wanders from the flock, the dog brings it back.

In order to keep accurate records and to prevent sheep from straying, ancient shepherds had to perform frequent head-counts of their flocks. In some parts of the world, farms were granted access to common grazing land—land that everyone could use. To prevent overgrazing, it was necessary for each farm to keep accurate, updated head counts. A count was the first action performed in the morning and the last action performed at night. A count was made after moving the sheep from one pasture to another and after any operation involving the sheep, such as shearing, foot-trimming, etc. Before the Industrial Revolution, shepherds in England, Scotland and Wales used their own numbering system for counting their sheep, with counting words to 20, but no higher. For every 20 sheep the shepherd would place a mark on the ground, move his hands to another mark on the crook or drop a pebble in his pocket. Twenty sheep was a score (5 score sheep = 100).

There are many different breeds of sheep. Some are raised for meat, and others primarily for their wool. Sheep are valuable because they often graze land that other livestock cannot. Sheep eat grass and hay. Oklahoma is a good place for raising sheep because it is one of only a few states that has year-round forage production.

Procedures

1. Read and discuss background and vocabulary.
 - Discuss what basic needs of consumers sheep provide (food and clothing).
 - Locate the United States, England, Scotland and Wales on a map. What ocean separates these countries?

Oklahoma Academic Standards

KINDERGARTEN

Social Studies Content—2.3; 3.2; 4.3
Number & Operations: 1.1,2,4,5,6;
2.1; 3.1. Geometry: 4. Data: 1,2,3
Speaking and Listening: R.1,2,3,4;
W.1,2. Reading and Writing Process:
1,3. Vocabulary: 1,2,3

GRADE 1

Social Studies Content: 2.2; 3.3
Number & Operations: 1.2,3,4,8;
2.1,3. Geometry: 1.2,3. Measurement:
2.5. Data: 1,2,3
Speaking and Listening: R.1,2,3,4;
W.1,2. Reading and Writing Process:
1,3. Vocabulary: 1,3,5

GRADE 2

Social Studies Content: 3.2
Number & Operations: 1.1; 2.5,6.
Measurement: 1,3. Data: 1,2,4
Speaking and Listening: R.1,2,3,4;
W.1,2. Reading Foundations: 2.
Reading and Writing Process: 3.
Vocabulary: 1,3,5

GRADE 3

Social Studies Content: 2.3
Number & Operations: 1.1; 2.1,2,5.
Data: 1
Speaking and Listening: R.1,2,3,4;
W.1,2. Reading Foundations: 2.
Reading and Writing Process: 3.
Vocabulary: 1,3,5

Celtic Counting Words

1. yan
2. tan
3. tethera
4. pethera
5. pip
6. sethera
7. lethera
8. hovera
9. covera
10. dik
11. yan-adik
12. tan-a-dik
13. tethera-dik
14. pethera-dik
15. bumfit
16. yan-a-bumfit
17. tan-a-bumfit
18. tethera- bumfit
19. petherafumfit
20. figgot

2. Divide students into groups, and provide each group with a bowl of plain popcorn. Tell students that the popcorn represents sheep.
 - Students will design their own systems for keeping count similar to the systems used by ancient shepherds described in the background (tally marks, knots on a string, pebbles, etc.)
 - Students will count their “sheep,” first by fives, then by tens, and then by twenties, using the systems they have designed.
 - Students will multiply to find the total number of sheep for each group and for the class.
 - If each group is allowed to graze 100 sheep, how many sheep must be sold?
3. Provide construction paper and bowls of popcorn. Students will make handprint sheep, as follows:
 - Trace your hand on the construction paper and cut it out.
 - Draw a sheep face on the thumb.
 - Draw hooves on the tips of the fingers.
 - Estimate how many kernels of popcorn it will take to cover the main part of the hand (the “lamb body”).
 - Count the popcorn kernels to find a nonstandard measure of the area of the “lamb bodies.”
 - Older students will measure a popcorn kernel in approximate metric units to establish a benchmark for measuring and use a grid to find the area.
 - Students will design a classroom graph to show the areas of the “lamb bodies.”
 - Students will glue popcorn to cover the “lamb body” to look like wool.
4. Read the Celtic counting words included with this lesson to the class.
 - Students will pay attention to the rhythm and discuss what about the rhythm would be helpful with the counting.
 - Students will count their “sheep” as you read the words and use their markers to keep track of each score (20) of sheep.
5. Students will make up their own counting words, from one to twenty.
6. Students will research to find counting words in other languages, using online or library resources.
7. Read the words to “The Lincolnshire Shepherd,” a traditional Irish song, included with this lesson, or provide the words and let students follow along while listening to a recording of the song: <http://www.youtube.com/watch?v=gigtam4omoy>
 - Divide the class into groups, and assign one of the verses to each group.
 - Groups will read through assigned verses, look up unfamiliar words or phrases in a dictionary or using an online search engine and provide interpretations for the class.

The Lincolnshire Shepherd

Chorus (after each verse):

Yan, tan, tethera, tethera, pethera, pimp.
Yon owd ewe's far-weltd, and this ewe's got a limp
Sethera, methera, hovera, and covera up to dik,
Aye, we can deal wi' 'em all, and wheer's me crook and stick?

I count 'em up to figgits, and figgits have a notch,
There's more to being a shepherd than being on watch;
There's swedes* to chop and lambing time and snow upon the rick,
Sethera, methera, hovera, and covera up to dik.

From Caistor down to Spilsby from Sleaford up to Brigg,
There's Lincoln sheep all on the chalk, all hung wi' wool and big.
And I, here in Langton wi' this same old flock.,
Just as me grandad did afore they meddled with the clock.

We've bred our tups and gimmers for the wool and length and girth,
And sheep have lambed, have gone away all o'er all the earth.
They're bred in foreign flocks to give the wool its length and crimp,
Yan, tan, tethera, pethera, pimp.

They're like a lot of bairns**, they are, like children of me own,
They fondle round about owd Shep*** afore they're strong and grown;
But they gets independent-like, before you know, they've gone,
But yet again, next lambing time we'll 'a' more to carry on.

Yan, tan, tethera, tethera, pethera, pimp,
Fifteen notches up to now and one ewe with a limp.
You reckons I should go away, you know i'll never go,
For lambing time's on top of us and it'll surely snow.

Well, one day I'll leave me ewes, I'll leave me ewes for good,
And then you'll know what breeding is in flocks and human blood;
For our Tom's come out o' t' army, his face as red as brick,
Sethera, methera, hovera, and covera up to dik.

Now lambing time come reg'lar-like, just as it's always been,
And shepherds have to winter 'em and tent 'em till they're weaned
My fambly had it 'fore i came, they'll have it when I sleep,
So we can count our lambing times as I am countin sheep

*swedes= turnips, **bairns = children, ***owd Shep = sheep herder's dog

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