## Skills:

Understanding tally marks
Reading, using, and analyzing tables with tallies and frequencies

## Students work with tallies and frequencies based on an observation investigation.

| Tasks | Tier 1 <br> Below Level | Tier 2 <br> On Level | Tier 3 <br> Above Level |
| :--- | :---: | :---: | :---: |
| Read tally marks. | X | X | X |
| Complete frequencies in a tally table. | X | X | X |
| Solve problems based on tally and frequency <br> tables. | X | X | X |
| Classify, count, tally, and present data in a table. | X | X |  |
| Create a tally and frequency table to display data. |  |  | X |

## Getting Started

See the tips below for introducing the lesson. Make copies of the student data sheet (page 9) and the appropriate leveled activity sheet for each group of learners (pages 10-12).

Access prior knowledge by reviewing different kinds of tables. You may also want to have students practice skip counting by 5 s . Discuss how to collect and record data quickly and accurately.

## Tier 1

- Understand Tally Marks: Discuss the purpose of the tally table and how it was created. Explain why the table has frequencies as well as tally marks and how the two representations of the data go together. Have children fill in the frequency section of the table.
- Use the Table: Invite children to work in pairs to help each other read and solve the problems.
- Complete a Tally Table: You may have children work in pairs on this activity. Guide them to count all kinds of doors: on cupboards, closets, lockers, and so on. They can count tables, desks, and light switches or light fixtures. Encourage them to count carefully, making tally marks as they go. Have them record the frequencies last.


## Tier 2

- Understand Tally Marks: Ask a series of questions to evaluate children's understanding of the data in the table. Be sure they notice why the data in the Tallies and Frequency columns should match.
- Use the Table: Invite children to work in pairs to help each other read and solve the problems.
- Complete a Tally Table:

Direct children to the four sentences shown inside the clipboard as the target of their investigation. Clarify that repeated words (such as they and each) should be counted every time they appear. Suggest that children check the sum of the frequencies against the number of tally marks.

## Tier 3

- Understand Tally Marks: Challenge children to think critically about what the table does not show. Ask students what summarizing statements could be made based on the data. Example: Not many people drive motorcycles in the area.
- Use the Table: As needed, encourage children to visualize the changes described in items 4 and 5.
- Make a Tally Table: Verify that children understand the riddle. Then suggest that they cross out each vowel, consonant, and capital letter as they count and tally it. They can also circle each 3-letter word as they tally it. If necessary, work with children to develop a format for their tally and frequency table. Display and discuss the results together.
$\qquad$ Date $\qquad$


## Standing on the Corner: Data Sheet

Skills:
Understanding tally marks
Reading, using, and analyzing tables with tallies and frequencies

Iris and Lamar stood on a street corner for half an hour. They counted each kind of vehicle that passed by. They made a tally mark for each vehicle they saw. They kept track in a tally table.

Remember that this means 5: HH
 Here is the tally table with only the first tally added.


## Vehicles We Saw from 11:00 to 11:30 AM

| Vehicle | Tallies | Frequency |
| :--- | :--- | :---: |
| Bus | HH I | 6 |
| Car | HY HH HH HY IIII |  |
| Motorcycle | III |  |
| Taxi | HH HH II |  |
| Truck | HY HH HH |  |


$\qquad$

## Standing on the Corner: Activity Sheet

## Understand Tally Marks

Finish the tally table on the Data Sheet. Write the total number of tallies for each vehicle in the Frequency column.

## Use the Table

Fill in each answer.


1. Iris and Lamar counted $\qquad$ cars.
2. Iris and Lamar counted $\qquad$ taxis.
3. They counted 3 $\qquad$
4. They counted $\qquad$ more taxis than buses.
5. They counted $\qquad$ fewer taxis than cars.

## Complete a Tally Table

Count things in your classroom. Make tallies and list frequencies in the table below.

## Counting Classroom Items

| Item | Tallies | Frequency |
| :--- | :--- | :--- |
| Window |  |  |
| Door |  |  |
| Desk |  |  |
| Chair |  |  |
| Light |  |  |

## Standing on the Corner: Activity Sheet

## Understand Tally Marks

Finish the tally table on the Data Sheet. Write the total number of tallies in the Frequency column.

## Use the Table

Answer each question or fill in the information.

1. How many buses and cars did Iris and Lamar count? $\qquad$
2. How many more trucks passed by than motorcycles? $\qquad$
3. How many fewer taxis than trucks did they count? $\qquad$
4. Iris and Lamar counted half as many taxis as $\qquad$
5. They counted 5 times as many trucks as $\qquad$
6. How many vehicles did they count in all? $\qquad$


## Complete a Tally Table

Count all the words from "Iris" to "added" on the Data Sheet. Tally them by the number of letters in a word. Show your results in the tally column of the table below. Then list the frequencies.

| Number of Letters <br> in a Word | Tallies | Frequency |
| :---: | :--- | :--- |
| 1 letter |  |  |
| 2 letters |  |  |
| 3 letters |  |  |
| 4 letters |  |  |
| 5 letters |  |  |
| 6 letters |  |  |
| 7 letters |  |  |

$\qquad$

## Standing on the Corner: Activity Sheet

## Understand Tally Marks

Finish the tally table on the Data Sheet. Write the total number of tallies in the Frequency column.

## Use the Table

Answer each question.

1. How many vehicles did Iris and Lamar see in all? $\qquad$
2. How many more cars did they see than taxis and buses? $\qquad$
3. How many times as many cars as buses did they count? $\qquad$
4. If Iris and Lamar had seen 30 cars, how would the table change?

How many total vehicles would there be then? $\qquad$
5. If Iris and Lamar counted twice as many trucks as taxis, how would the table change? $\qquad$

## Make a Tally Table

The box below has a riddle and its answer.
Count all the vowels, consonants, capitals, and 3-letter words in the box. On a separate sheet of paper, show your results in a tally table and then write the frequencies. Use these headings for your tally table:

| Kinds of Letters and Words | Tallies | Frequency |
| :--- | :--- | :--- |



What makes a bed get longer at night?
Two feet are added to it!

## Answer Key

## Standing on the Corner

Tier 1, page 10: Understand Tally Marks: car: 24, motorcycle: 3, taxi: 12, truck: 15; Use the Table: 1. 24, 2. 12, 3. motorcycles 4. 6, 5. 12; Complete a Tally Table: Answers will vary. See that tally marks match the frequency for each item.
Tier 2, page 11: Understand Tally Marks: car: 24, motorcycle: 3, taxi: 12, truck: 15 ; Use the Table: 1. 30, 2. 12, 3. 3, 4. cars 5. motorcycles 6. 60 Complete a Tally Table: Check that students' tallies match the following frequencies: 1 letter: 3; 2 letters: 5; 3 letters: 4; 4 letters: 14; 5 letters: $6 ; 6$ letters: $3 ; 7$ letters: 3 . Total number of words: 38.
Tier 3, page 12: Understand Tally Marks: car: 24 , motorcycle: 3, taxi: 12 , truck: 15 ; Use the Table: $1.60,2.6,3.4,4$. There would be 6 sets of 5 tally marks for cars and the frequency would say 30 . 5. There would be 66 total vehicles. 6 . There would be 9 more tally marks for trucks and the frequency would say 24 . Make a Tally
Table: Check that students' tallies match the frequencies.

| Kinds of Letters <br> and Words | Tallies | Frequency |
| :--- | :--- | :--- |
| Vowels | HH HH HH \\|\|\| | 19 |
| Consonants | HY HH HH HH HH \\|\|\| | 29 |
| Capitals | $\\|$ | 2 |
| 3-Letter Words | $\\|\\|\\|$ | 4 |

