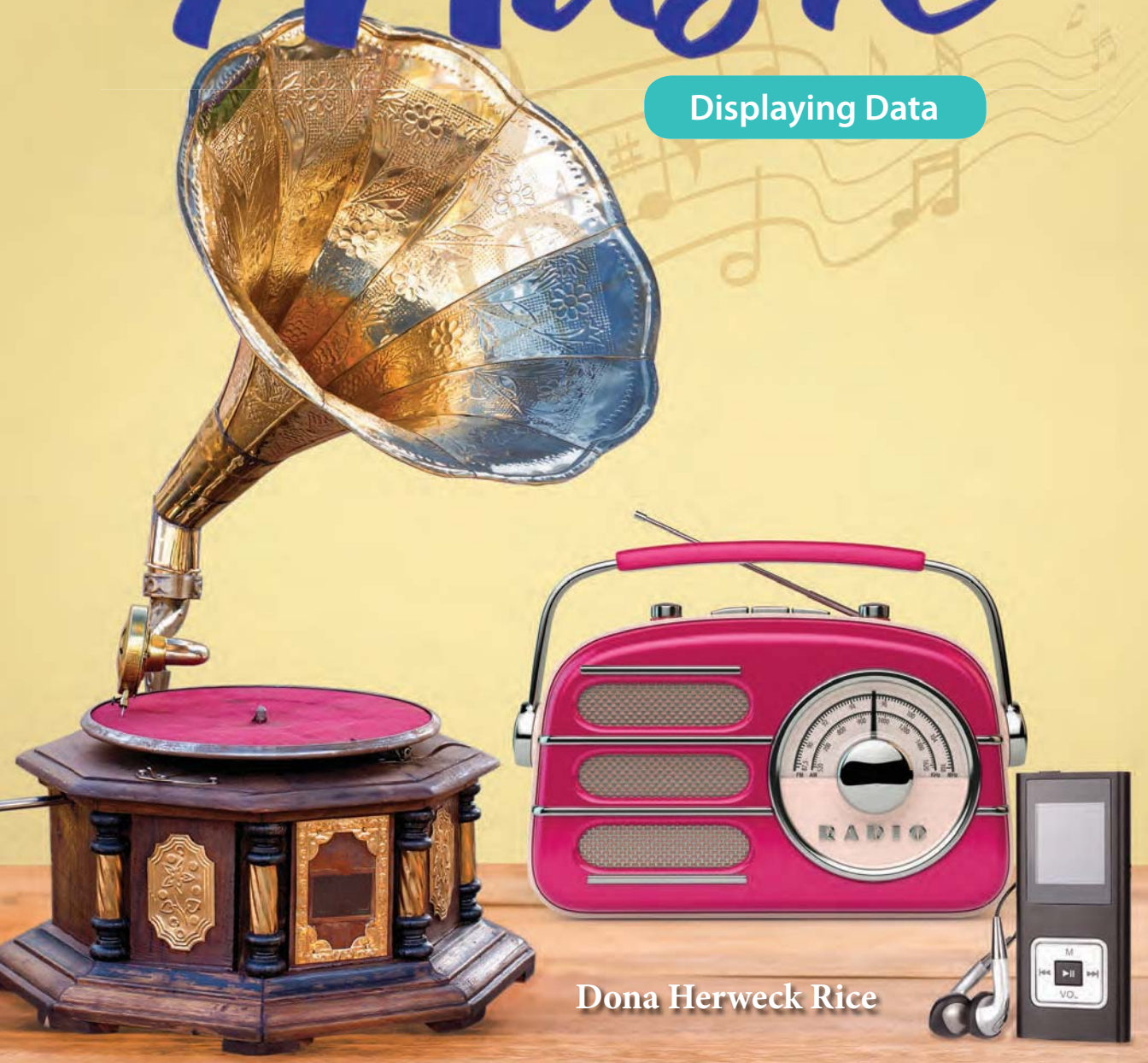
The History of

Listening to Music

Displaying Data



Dona Herweck Rice

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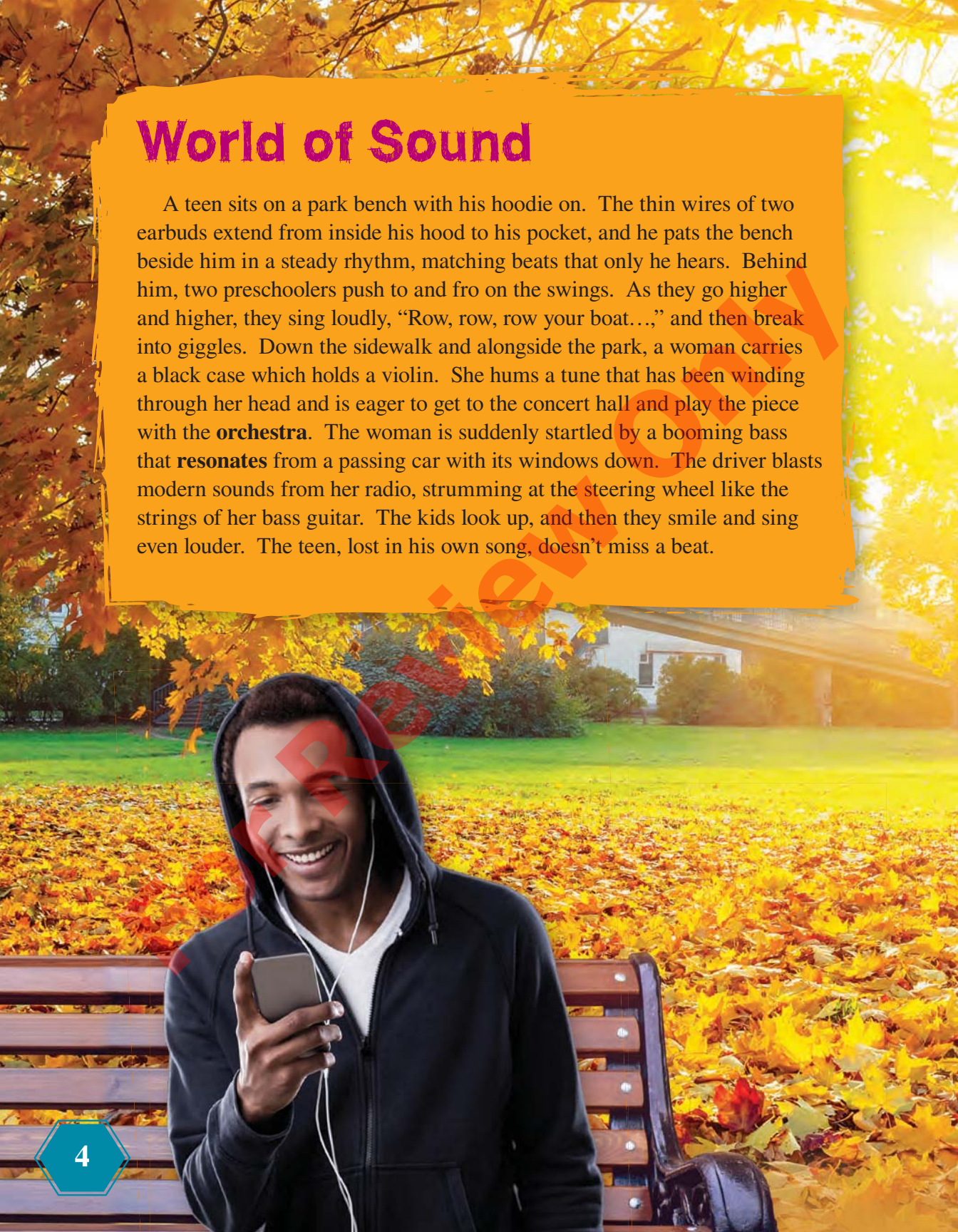
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For Review Only

World of Sound

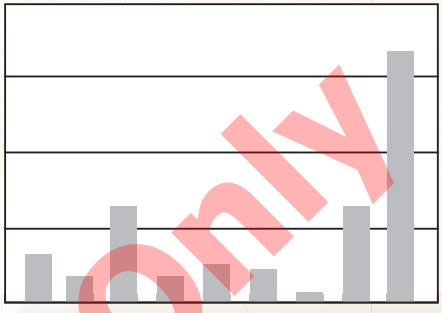
A teen sits on a park bench with his hoodie on. The thin wires of two earbuds extend from inside his hood to his pocket, and he pats the bench beside him in a steady rhythm, matching beats that only he hears. Behind him, two preschoolers push to and fro on the swings. As they go higher and higher, they sing loudly, "Row, row, row your boat…," and then break into giggles. Down the sidewalk and alongside the park, a woman carries a black case which holds a violin. She hums a tune that has been winding through her head and is eager to get to the concert hall and play the piece with the **orchestra**. The woman is suddenly startled by a booming bass that **resonates** from a passing car with its windows down. The driver blasts modern sounds from her radio, strumming at the steering wheel like the strings of her bass guitar. The kids look up, and then they smile and sing even louder. The teen, lost in his own song, doesn't miss a beat.



Review Only

Let's Explore Math

The violinist spotted at the park is heading to an orchestra rehearsal. Imagine that there are 34 violins, 12 violas, 12 cellos, and 6 basses in the string section. The woodwind section has 5 flutes, 4 oboes, 3 clarinets, 3 bassoons, and 1 piccolo. This data is displayed in the incomplete bar graph.



1. The bar graph is missing key information. What must be added to make the display understandable?
2. Ask and answer two questions using the data in the bar graph.



For Review Only

Music Everywhere

Music is all around us. Nearly everywhere we go, music is being played. Whether in a restaurant, in cars, on a bus, inside a shop, or coming from smartphones, our world is filled with **melodies** and rhythms. Just try to think of a place without music. It is hard to do. And where there is no music, it is a pretty safe bet that someone would like there to be!

Archaeology shows that music has been part of human life since ancient times. Instruments of many kinds are among the common archaeological finds. But perhaps no time in history has seen such **ubiquitous** (yoo-BIH-kwih-tuhs) listening as today. Our access to music is everywhere and immediate. There are instruments, of course, just as there have always been. But computers, tablets, smartphones, and more are just a few of the ways that make listening to music today as easy as pushing buttons or plugging in.

What exactly is our history with music? Why do we listen? How do we listen? And what makes listening to music such a big deal for us all?



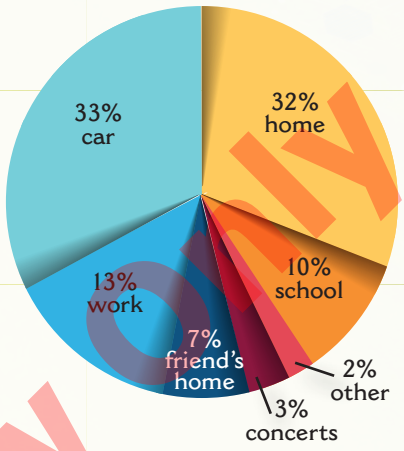
A band plays for a crowd of shoppers in Istanbul, Turkey.

For Preview Only

LET'S EXPLORE MATH

Rosalie asks students in her school, "Where do you most often listen to music?" She summarizes the data in a circle graph, and students ask her questions about it. Decide whether each question can be answered only using the data in the circle graph. Answer the questions or explain why they cannot be answered.

1. How many people were surveyed?
2. Do more people listen to music at home or in the car?





People celebrate the Hindu festival of Holi with flowers, colored powder, and music.

For Review Only

History Strikes a Chord

There is plenty of evidence that early humans played music, and this is not surprising to find. It is clear that people enjoy music. Even babies love toy instruments—or just banging on anything handy (such as pots and pans, a table, or the floor) to make some great noise!

Some things that have been found by archaeologists and were likely used as instruments date back many thousands of years. The earliest known instruments were made of bones and other natural items. For example, hollow bones became flutes and whistles. Large shells were used as horns.

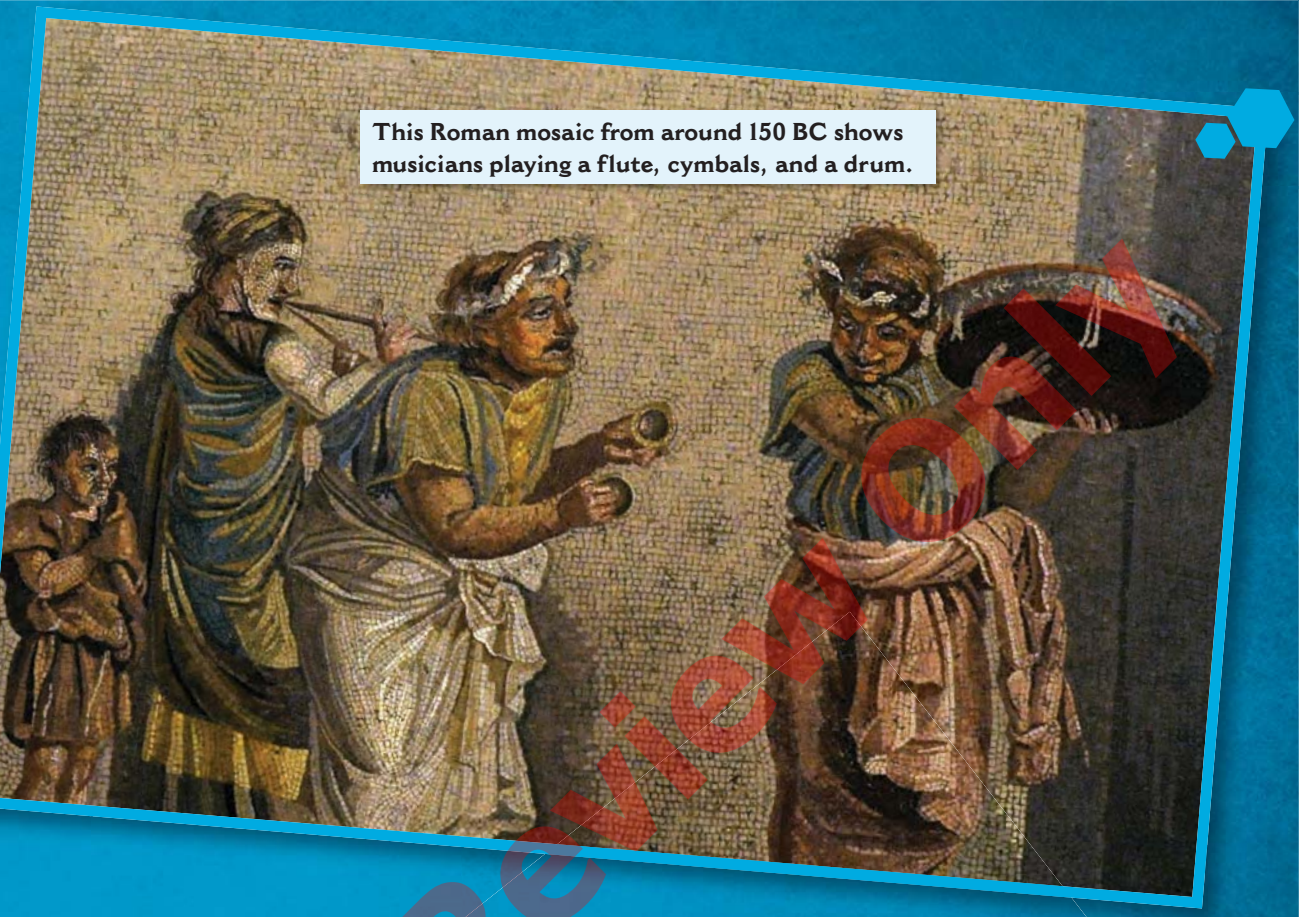
Historians believe that the first instruments were used to communicate. Hunters, for example, could whistle to one another or bang drums to gather others or to offer warnings. Even now, there are groups of people around the world who use tools like these to communicate for similar reasons.

There is no writing from these early times to suggest that people composed music. It is also unlikely they played or listened just for pleasure. But play and listen they did.



A German museum claims this is the world's oldest instrument—a flute from the Ice Age made of bone from a swan's wings.

For Review Only



This Roman mosaic from around 150 BC shows musicians playing a flute, cymbals, and a drum.



This Tibetan conch shell was once used as a horn.

For Review Only