

Summary of learning goals

The purpose of this sequence is to sort, classify, represent and interpret data. Students learn to choose simple questions for a survey, gather responses and make simple inferences from their data. Students learn to create simple picture graphs and explore the ways in which the data vary between the different categories. They then use the data to make decisions.

Australian Curriculum: Mathematics (Year 1)

ACMSP262: Choose simple questions and gather responses and make simple inferences.

ACMSP263: Represent data with objects and drawings, where one object or drawing represents one data value. Describe the displays.

Summary of lessons

Who is this sequence for?

- It is anticipated that students will not have had much experience with data collection and representation. It does require them to count with one-to-one correspondence and to compare numbers to at least 20.

Lesson 1: Draw a Playground

Students are asked to brainstorm different playground equipment. They then draw a playground that they think all children would love.

Lesson 2: What is Your Favourite?

The class works together to gather data on the playground facilities they have and enjoy in their school and local community. They organise and represent the data as a people graph and then as a column graph. Students use the graphs to answer questions and make simple inferences.

Lesson 3: Asking Others

Students work in groups to survey another class on what is their favourite playground equipment, then organise the data collected and represent it in a simple column graph. They compare this graph to the graph created in Lesson 2, which displays their own class' favourite playground equipment.

Lesson 4: Design a Playground

Students use the data collected in Lessons 2 and 3 to design the ideal playground, and justify their playground design by making references to the data.

Reflection on this sequence

Rationale

This sequence focuses on developing the fundamental understanding of variation in data through a meaningful context.

By carefully choosing simple questions and gathering responses, students can make simple inferences about what equipment should be included in the ideal playground. Students learn to represent their data with objects and drawings, using one-to-one correspondence. Students compare their column graphs and use the data to justify their playground design.

The focus on variability is what distinguishes statistics from mathematics.



reSolve mathematics is purposeful

- The lesson builds students' understanding of variation in data.
- The context of designing a playground is personally significant to students and enables students to meaningfully analyse the data and make inferences.



reSolve tasks are inclusive and challenging

- The collaborative nature of this task provides access for all students.
- Challenge is provided to students, as they are asked to make inferences and draw conclusions of varying complexity based on the data presented.



reSolve classrooms have a knowledge-building culture

- The task is completed as a class, allowing students to learn from others' contributions. This allows students to build on the collective knowledge on the class while also extending their individual understanding.