Statistics: Origami frogs

**(Y4)**

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| To read the most recent version of this sequence, download associated resources, and view embedded professional learning including classroom videos and work samples, visit: [https://resolve.edu.au/teaching-sequences/year-4/statistics-origami-frogs](https://resolve.edu.au/teaching-sequences/year-4/statistics-origami-frogs?utm_source=docx&utm_medium=sequence_overview&utm_campaign=origami_frogs) |

# Sequence Overview

## About this sequence

Students investigate how far an origami frog can jump. They define their question, plan, collect and record data. They analyse this data and use it as evidence to answer the question.

## Australian Curriculum: Mathematics (Year 4)

### Achievement standard

Students create many-to-one data displays, assess the suitability of displays for representing data and discuss the shape of distributions and variation in data. They use surveys and digital tools to generate categorical or discrete numerical data in statistical investigations and communicate their findings in context.

### Statistics

**AC9M4ST01 -** Acquire data for categorical and discrete numerical variables to address a question of interest or purpose using digital tools; represent data using many-to-one pictographs, column graphs and other displays or visualisations; interpret and discuss the information that has been created

**AC9M4ST02 -** Analyse the effectiveness of different displays or visualisations in illustrating and comparing data distributions, then discuss the shape of distributions and the variation in the data

**AC9M4ST03 -** Conduct statistical investigations, collecting data through survey responses and other methods; record and display data using digital tools; interpret the data and communicate the results

# Lessons in this sequence

## Lesson 1 • Making origami frogs

Students make origami frogs and informally experiment with making them jump.

## Lesson 2 • Jumping frogs

Students establish protocols to control some variables, so that the data they collect on frog jump distance is reliable.

## Lesson 3 • Four jumps

Students collect data from four frog jumps, following the jumping and measuring protocols established in the previous lesson. They focus on collecting consistent, reliable data.

## Lesson 4 • Dots and hats

Students represent their jump data, and use the data as evidence for predictions.

## Lesson 5 • How far our frogs jump

With their frogs, students participate in a class jump-off. They use the data gathered in the jump off to answer the question "How far can an origami frog jump?".

## Optional investigations • Which jumps further?

Students continue to investigate which origami animal jumps further.

## Suggested implementation

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|  | **Week 1** |
| **Monday** | **Lesson 1 • Making origami frogs**  Problem   * Origami frogs * Making origami frogs * Jumping frogs |
| **Tuesday** | **Lesson 2 • Jumping frogs**  Plan   * Your frog * Pilot the plan |
| **Wednesday** | **Lesson 3 • Four jumps**  Data   * Jumping frogs |
| **Thursday** | **Lesson 4 • Dots and hats**  Data & Analyse   * Organising data * Hat plots * New data |
| **Friday** | **Lesson 5 • How far our frogs jump**  Conclusion   * How far a frog might jump * Frog jump-off |