# **Lesson 3: Take a Guess**

# Big Idea

Pets come in many different shapes and sizes. They have different characteristics, habits, needs and lifespans. Pet owners need lots of information about a pet before making a decision to adopt or purchase from a reliable breeder.

### Learning Goal

Students will gather, organize and communicate accurate information about the expected lifespan of a variety of common pets. They will use the data gathered to make recommendations for choosing a pet.

### Links to Ontario Curriculum

### **Grade 1**

Language (Oral Language)			
2.3	Communicate ideas and information orally in a clear, coherent manner		
2.4	Choose appropriate words to communicate their meaning accurately and engage the interest of their audience		
Science (Understanding Life Systems Needs and Characteristics of Living Things)			
2.3	Investigate and compare the physical characteristics of a variety of plants and animals, including humans		
2.7	Use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes		
Mathematics (Data Management and Probability)			

Read primary data presented in concrete graphs and pictographs, and describe the data using comparative language



### **Grade 2**

Language (Oral Language)				
2.3	Communicate ideas, opinions, and information orally in a clear, coherent manner using simple but appropriate organizational patterns			
2.4	Choose a variety of appropriate words and phrases to communicate their meaning accurately and engage the interest of their audience			
Science (Understanding Life Systems Needs and Characteristics of Living Things)				
2.3	Investigate the life cycle of a variety of animals, using a variety of methods and resources			
2.6	Use scientific inquiry/research skills and knowledge acquired from previous investigations, to investigate the basic needs, characteristics, behaviour, and adaptations of an animal of their choice			
2.8	Use a variety of forms to communicate with different audiences and for a variety of purposes			

### Mathematics (Data Management and Probability)

Demonstrate an understanding of data displayed in a graph (e.g., by telling a story, by drawing a picture), by comparing different parts of the data and by making statements about the data as a whole

Pose and answer questions about class generated data in concrete graphs, pictographs, line plots, simple bar graphs, and tally charts

### **Grade 3**

Language (Oral Language)		
2.3	Communicate orally in a clear, coherent manner, presenting ideas, opinions, and information in a logical sequence	
2.4	Choose a variety of appropriate words and phrases, including descriptive words and some technical vocabulary, and a few elements of style, to communicate their meaning accurately and engage the interest of their audience	

### Mathematics (Data Management and Probability)

Read primary data presented in charts, tables, and graphs (including vertical and horizontal bar graphs), then describe the data using comparative language, and describe the shape of the data

Interpret and draw conclusions from data presented in charts, tables, and graphs



# Organization

#### Approximate Total Lesson Time: 60 - 120 minutes.

Note: The times listed are intended to be used as a guideline. Teachers may make adjustments to time as needed to suit the needs and size of their class.

Materials	Quantity
Chalk/white board or chart paper	1
Writing utensil for instruction	1
One or more of: Animal Lifespan (Modified Line Graph), Animal Fact Cards, or other resources (see Additional Resources)	Sufficient amount for every student to explore simultaneously. Varies depending on resources.
Printed 'Research Outline' (provided at end of lesson)	1 per student
Graph paper or unifix cubes	1 piece per student or group or a bin of unifix cubes
Writing utensil for students	1 per student

# Required Background Knowledge

Students need some understanding of data management and graphing. Students also need to understand the concept of life expectancy or lifespan. Consider reading a book such as Eric Carle's The Very Hungry Caterpillar or watch SplashN' Boots' music video, "Tilly the Tadpole" https://www.youtube.com/watch?v=QR8inKrG3iY) as a springboard to discuss the concepts of the life cycle and lifespan.

If used in previous lessons, add "lifespan" to the word wall. See the appendix for word wall cards.

### **Engagement & Making Connections**

Invite students to develop a collaborative list of as many different kinds of pets as possible.

Select a number of different types of pets from their list (e.g., a horse, parrot, gerbil, guinea pig, lizard, rabbit, as well as a dog or cat). Write these words on chart paper or the board.

Activate students' thinking about the needs and characteristics of different pets by posing the following question about each.

• What might you need to know about this kind of pet before you and your family decide to adopt it or purchase it from a responsible breeder?



# Challenge & Collaboration

Invite your students to choose a partner for an investigation. Alternatively, pre-select partners that meet students' particular needs.

Explain to the students that their investigation will involve finding out about one characteristic of different kinds of pets - how long they usually live.

Challenge students to create a guiding question for their investigation. (e.g., How long does a parrot usually live?)

Ask pairs of students to select a pet from the list developed by the class. Give students the Research Outline handout. Have students guess how long they think the animal might live and write their hypothesis on the handout.

Provide an appropriate resource(s) for students to use for their investigation. Please note:

- The Animal Lifespan modified line graph (provided at the end of this lesson) would be the quickest source of data for students.
- The Animal Fact Cards (provided at the end of this lesson) would take more time.
- An independent inquiry using books or websites (see Additional Resources) would take the most amount of time.

Tech Tip: Have students use voice to speech app, such as Voice Dream Reader, or the speech and dictation software built into your computer/device to decode the Animal Fact Cards and/or webpages.

Have students share the results of their investigation with the whole class.

As a whole-group, or in small groups, have students graph their findings about how long pets usually live by creating a bar graph. Title the bar graph: "How Long Pets Usually Live" and label one axis with "Age" and the other axis with "Pet". Ask questions such as:

- Which pets live the longest amount of time?
- Which pets live the shortest amount of time?
- What can you say about our graph overall?

Tech Tip: "Create a Graph" is a website that teachers can use to input data to make a graph as a class. https://nces.ed.gov/nceskids/createagraph/

Alternatively, students may represent their animal's lifespan with math manipulatives, such as unifix cubes.

For those looking for a further challenge, students can calculate how long they can expect to live in comparison to the pets on the list.



### **Reflection & Response**

Engage students in reflecting on their learning experiences using prompts such as:

- Why would it be important to think about how long a pet will live before deciding which pet to choose?
- Why would the size and weight of a pet be important information?
- How would you feel about getting a pet that usually lives for a short time?
- How would you feel about getting a pet that usually lives for a very long time?
- Who might want to adopt the pet that you investigated?

### **Optional Extension**

Create 5-10 KWL (What I know (K), What I Wonder (W), What I Learned (L)) charts with different animal names on the top of each one. Invite students to rotate around the room and record what they know (K) and what they wonder (W) on the chart. Refer to these charts throughout the unit and record all new findings under (L).

### **Additional Resources**

#### Website

 "A to Z Animals" http://a-z-animals.com/ A kid-friendly site about animals. In the fact box about each animal, lifespan weight, size, etc. are listed.

#### **Books**

Since this lesson has to do with life expectancy, there may be feelings of sadness about the death of a pet (especially from those children who have experienced this). The following books may help children deal with the loss of a pet (we recommend that teachers preview all books and use their professional judgment about appropriateness of books):

- 1. "I'll Always Love You" by Hans Wilhelm A little boy grows up with his dog and one day has to say good-bye forever.
- 2. "Saying Goodbye to Lulu" by Corinne Demas, illustrated by Ard Hoyt As her Lulu dog grows up and old, a little girl must say goodbye to her pet.
- "Angel in a dog suit" by Mary Giuffre, scribbles by Paul L. Clark The story of a dog rescued from a puppy mill who finds her forever loving family to live out her life with.



Note: We recommend that teachers preview all materials before sharing with the class to ensure that the material is suitable. While resources are listed for each lesson, resources may be suitable for many of the lessons. Please visit the AnimalSmart website for more resources.

