

EDUCATOR GUIDE

STEP 3: COLLECTING DATA



INTRODUCTION: 5-10 MIN

1

Use the anchor chart and review the first two steps of the scientific method: observation and asking questions/problem-solving.

TEACHER NOTE: You can complete over 2 days.

Day 1: Intro (5-10 minutes) and See it: Show and discuss episode (15-20 minutes).

Day 2: Be it! Complete hands on activity (15-20 minutes).

2

Have an item and tell students that we have to find a box that the item will fit in. Ask students “What can we do to make sure the item fits in the box?” Write down their answers. Help lead them to take measurements. Perform measurements on height, length, width etc. At the end, ask students “Will the item fit in the box?” Explain that they just collected data to help solve a problem. Say, “Today we are going to focus on the third step of the scientific method: collecting data.”



3

Provide each student with a *Collecting: Student Activity Sheet*. Read together “**Data is a collection of information.** We can collect data through observations, asking questions, and taking measurements. It can include facts, numbers, and measurements. For example, if we wanted to know where Queen Frivol place was to dump trash in Confetti, we could write down where she dumps trash.

4

Ask students to answer the question on their activity sheet: “What other information or data should we measure about Queen Frivol and her trash to help us answer our questions?” Have students write out their answers or share their answers verbally.

SEE IT!

WATCH & DISCUSS EPISODE: 15-20 MIN



5

Explain to students that in this episode, “Paws-itively Fabulous”, Reese, Caily, and Edie notice something about Jennifer the ferret. Jax shares more information with the girls and they discover a problem to be solved. In order to solve the problem, the girls must collect some data. Students will follow along and answer the questions about Reese, Caily, and Edie’s observations, their problem, and the data they need to collect to solve it. Read questions as a class prior to watching the episode.

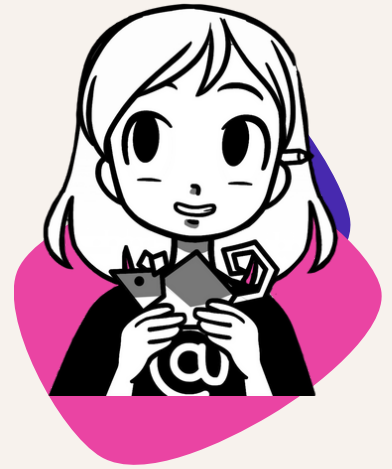
6

Have students watch Episode 6: Paws-itively Fabulous. Watch the video as a class or individually. It is okay to pause or rewatch the video if students need help answering the questions.

7

After students have answered the questions, talk about the answers together. Some options to differentiate include reading and answering each question as a class after watching the video or placing students in small groups to work together. Explain to students that when we collect data we are collecting evidence. Collecting data helps us answer our questions and solve problems.

BE IT!



HANDS-ON ACTIVITY: 10-20 MIN

8

Review with students the first three steps of the scientific method. Remind students that they will not taste anything when they visit a safe place. Explain that it is important to practice the skills many times.

9

Take students to a safe place to practice the first three steps of the scientific method. You may take your students to a completely different place or if it is not feasible have them observe a different part of the same place. For example, if a student looked out windows that face the back of the building, have them look out windows that face the front of the building. If you are not physically with the student, have them go with an adult to a safe place. This could be their home, backyard, front steps, park, etc.

10

Have the students work through making observations with the four senses: seeing, hearing, smelling, and touching (if it is safe). Some options to differentiate include reading and answering each question as a class or placing students in small groups to work together.

TEACHER NOTE:

You can have students observe an object such as an ice cube, a leaf, a plant, a piece of bread—place the bread in a ziplock bag and watch it develop mold over time.

11

After they have completed their initial observations, **have students complete asking questions and solving problems.** Have students share their questions about their space.

12

Now students will collect data points on their space. **Have them collect data points on plants, animals, and people.** Tell the students that it is ok if you do not see plants, animals, or people. Not seeing something is just as important as seeing something to scientists.

13

Once they have collected their data, discuss how data helps you understand what is going on in the space. For example, if I see 20 people and 0 animals, I wonder why there are no animals? Perhaps there are no animals because the people have scared them away. Knowing there are a lot of people in my space can give me possible answers to my questions but I need more data. Ask students what other data you should collect to help you answer your question. Possible answers may include watching my space for many days to see if more animals appear when there are not people or watching my space at different times during the day to see if more animals appear.

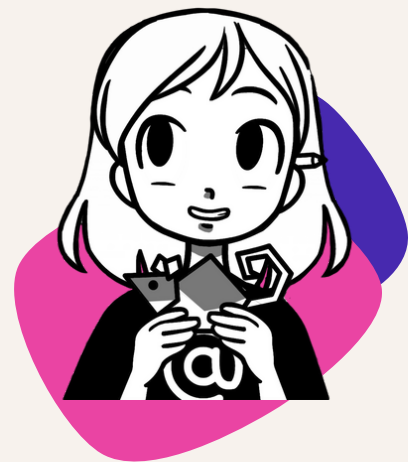
14

Have the students work through the questions about data. Discuss answers as a class.

15

Inform students that next time you will be focusing on the final step of the scientific method: communication. Say to students “Once we have gathered data it is important that we communicate or share that data with others.”

How would you share your data with others?



Discussing data can take additional time for students to understand. Here is an example of a class outline:

HERE IS AN EXAMPLE OF A CLASS OUTLINE:

Introduction: 20 minutes

See it: 20 minutes

Be It: 55-70 minutes

Observations - 15 minutes

Asking Questions - 15 minutes

Collecting Data - 5-10 minutes, Data

Discussion - 20-30 minutes

