



PRAIRIE DOGS: A COLONY OF CONNECTIONS* 2021

Grade Level: 4th

Setting: Prairie Natural Area

Description: Students learn about prairie dogs' burrows and their behaviors; and compare these to their own lives.

Theme: Prairie dogs have recognizable behaviors and live in underground burrows with several different rooms.

Time: 30-45 minutes

Recommended Group Size: 15 students

State Standards: Math 3 Measurement & Data: Represent and interpret data. Life Science 2 Students can use the full range of science and engineering practices to make sense of natural phenomena and solve problems that require understanding how individual organisms are configured and how these structures function to support life, growth, behavior and reproduction.

Materials list

- Background information about prairie dogs (Green Binder)
- Photos of prairie dog behaviors
- Picture of prairie dog burrow
- Binoculars (one per student)
- Prairie Dog behavior worksheet, clipboards, pencils
- Stopwatch or timer

ENGAGE

- Welcome students and introduce yourself. Ask students about their daily routines and indicate by a show of hands such things as: usually sleep and wake up, eat breakfast, brush teeth, brush hair, kiss someone goodbye, walk somewhere, pay attention to something, and communicate with someone (*or make up your own, these all have parallels to prairie dog behavior*).
- Ask students if they think that prairie dogs have the same behaviors or routines as people? Using their powers of observation, we will recognize different prairie dog behavior and discover similarities and differences between prairie dogs and humans. We will be using scientific tools: data forms, stopwatches, and binoculars.
- Discuss with students why observation is important to scientists (helps them collect data and form hypothesis'). Let students know that today they will become scientists and their job will be to observe prairie dog behavior and make hypothesis' about these actions.

EXPLORE/EXPLAIN

- **Activity 1 Binocular Familiarization/Observation:**
 - *Demonstrate how to take out the binoculars and adjust them BEFORE distributing the binoculars to the students.* Distribute binoculars and let the students practice using them.
 - Inform the students that to observe the animals showing their natural behavior they should be as quiet and still as possible once they get into position.

- Have the students observe the prairie dogs and notice what they are doing. Allow about 5 minutes for this free-form observation. (*Note: many students have limited experience using binoculars and this step may take more than 5 minutes to get all students settled using the binoculars.*)
- Students will now use another scientific tool- data sheets. Provide each student with an observation form and marker. Tell the students they should observe the prairie dogs, notice what they are doing, and write down their observations.
- After observing the second time, gather the students in a group on the edge of the prairie dog area (to minimize disturbing the animals) to compare what the students observed with photos of prairie dog behavior; then connect it to something similar that people do. Show each photo of prairie dog behavior and connect it to something similar that people do:
 - Resting/ Lying Down – like us sleeping or napping
 - Running or walking – like us getting from place to place
 - Ran down hole – like us seeking shelter when it’s raining or snowing out.
 - Digging – we construct our homes by digging and building OR we do work such as going to school, parent’s jobs.
 - Feeding – like us having meals or snacks.
 - Alert/looking around – like us paying attention in school.
 - Jump/Yip or Chattering – like us communicating with other people.
 - Touching or Socializing – like us talking to or being with family or friends.

ELABORATE

- **Activity 2 Behavior Activity:**
 - Students will be working in teams (number of students divided by number of worksheets).
 - Each team selects a recorder to start the activity (the recorder is given a behavior worksheet and a marker). All other group members are observers. Each group member will have a chance to be the recorder.
 - The group decides on their hypothesis and circles it on the worksheet.
 - The observer(s) watch(es) one prairie dog the whole time. Multiple students can watch (observe) the same prairie dogs.
 - Every 15-30 seconds (depending on how active the prairie dogs are) you will call “Mark” (or other signal).
 - The observer(s) tell(s) the recorder what behavior their prairie dog(s) was/were doing at that moment. The recorder makes a tally mark in that behavior column(s) on the sheet.
 - After two minutes (longer if time allows) tell them to switch jobs and repeat the activity till everyone has been the recorder.
 - When they are finished, ask each group to count-up their tally marks for each observed behavior and record it on their own sheet (answer 2-Findings).
 - Have them answer question 3 on their worksheet (did they confirm their hypothesis?).
 - Ask each group to compare their findings with their hypothesis. This is how scientists conduct experiments: make a hypothesis, then collect data to confirm or refute their hypothesis.
 - Ask each group to share the most frequent behavior they observed and compare it to the other group’s results.

EVALUATE

- Remind the students that prairie dogs have behaviors like people.
- Ask them to give examples of these behaviors.

- Explain that in Fort Collins there may seem to be a lot of prairie dogs, but they are nearly 98% gone (extirpated) from their former range in North America.
- We are very lucky to have them as our neighbors and have a responsibility to appreciate and protect them.
- Invite the students to bring their families out to observe fascinating prairie dog behavior in our natural areas (Coyote Ridge, Bobcat Ridge, and Pineridge)



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