
Keying Tracks



Objective

This activity introduces the concept of a dichotomous key and helps pinpoint the main characteristics students will look for identifying tracks - a great precursor to any of the other tracking activities. This activity is designed for 10 students.

Materials

- 5 Pink track cards labeled set A
- 5 Pink track cards labeled set B
- 5 Blue question cards, labeled 1a - 5a
- 5 Blue question cards, labeled 1b - 5b
- 1 Blue key card
- 4 Track ID booklets, various colors on metal rings (copied from *Animal Tracks of Washington and Oregon*)
- 5 Dry Erase Markers (Vis-a-vis Brand)
- 5 Laminated Keying Tracks Question Sheets, labeled Group A
- 5 Laminated Keying Tracks Question Sheets, labeled Group B

Appropriate Grade Level: 4th-8th

Time Required: 30-40 minutes

Curriculum Benchmarks:

Life Science, Organisms: Classify mammals based on a variety of characteristics.

Life Science, Diversity/Interdependence: Describe a habitat and the mammals that live there.

Activity Inventory:

See Materials List.

This activity is designed for 10 students.

Background Information

This activity introduces the concept of a **dichotomous key**: a branching identification key used in discovering the identity of a specimen. It is commonly constructed to lead the investigator through a sequence of choices so as to eliminate all but the specimen under observation. Each choice offers only two alternatives, in this case "yes" or "no."

Activity

1. Open by asking "Have any of you ever seen a track in the wild?" This generates a lively discussion of students' experiences with local fauna. Point out the substrates that were most often mentioned (snow, mud, sand, etc.).
2. Hold up two of the pink track cards and ask "What is similar and what is different about these two tracks?" This will help the students identify the major characteristics used to identify tracks such as number of toes, presence or absence of claw marks, similar or different shapes between front and back paws, etc.
3. Have the students define the terms "fore" (front) and "hind" (back) as these are used in the activity. Now you are ready to play the game.



4. Explain the definition of a dichotomous key and tell the students that they will become a human dichotomous key in order to begin identifying the pink track cards.
5. Divide the 10 students into two groups of 5. Have them form two single-file lines, then have the line turn to face each other.
6. Give each student in one line a pink track card from the set labeled A, and each student in the other line the blue question cards labeled 1a - 5a (in numerical order).
7. Demonstrate the game by having the first student in the pink card line approach the first student in the blue card line. The student with the blue question card 1a asks the student with the pink track card his/her question. The student with the pink track card should respond "yes" or "no." The student with the blue question card then refers to the bottom of his/her card to see whether that person is his/her partner, or whether they should move on to question 2a.
8. The next person holding a pink track card now approaches the student with the blue question card 1a, and so on. You may need to encourage the students to continue moving through the line, and it will also be helpful to look over the students' shoulders as they answer the various questions.
9. The end result of this game is that each student with a pink track card will be partnered up with a student holding a blue question card. It is helpful to suggest that the students with the pink track cards stand behind their partners with the blue question cards.
10. When everyone has found their partner, hand each partner pair a dry erase marker, a laminated Keying Tracks Question Sheet labeled Group A, and a track identification booklet. Have each student pair fill out the laminated question sheet with the dry erase marker.
11. When finished, each student pair can share with the entire group which track they had and something interesting that they learned about their animal.
12. This game can be played a second time or with 10 different students using the pink track cards labeled set B, the blue question cards labeled 1b-5b, and the laminated Keying Tracks Question Sheet labeled Group B.

Assessment

Put several track cards on display. Allow each student to individually study the tracks, and key out the identity of the mammal who made them. Have the students write down their results. Collect, and check for accuracy.



Keying Tracks Question Sheet

Group A

Which animal do you have?

Have you ever seen this animal? If so, where?

Do you think it lives in the Rogue Valley?

Describe its habitat.



Keying Tracks Question Sheet

Group B

Which animal do you have?

Have you ever seen this animal? If so, where?

Do you think it lives in the Rogue Valley?

Describe its habitat.

