TRB 4:5 - Investigation 8 -Classify UT Plants & Animals

Summary

Students will practice using 2 different plant classification keys to identify species.

Group Size

Small Groups

Materials

Classroom Activity Materials:

Preserve 5-10 leaves of each tree listed on the [tree key](#) (pdf).
Clear packing tape can be used to tape the leaf to card stock. Do not identify the leaves.
- [Classification key for Utah trees](#) (pdf)
for student.
Make an overhead copy for the teacher.
- [Utah Trees Classification worksheet](#) (pdf)
- [Pictures](#)
of the following trees: Juniper, Spruce, Pine, Willow, Quaking Aspen, Cottonwood, Oak and Maple.

Curriculum Extensions Materials:
- [Classification key for Utah Animals](#) (pdf)
- [Utah Animals Classification Worksheet](#) (pdf)

Background for Teachers

When a scientist discovers a new species of plant or animal, they don't create their own classification scheme. They will use an existing scheme which was created by grouping plants that share the similar characteristics. In this activity, the students will need to make choices between the similarities and differences between their object and the classification scheme.

Intended Learning Outcomes

1. Use science process and thinking skills

Instructional Procedures

Pre-Assessment/Invitation to Learn
Have the students bring one or two leaves from home. In small groups have the students start classifying the leaves into different groups. Remind the students that they need to look for similar characteristics. The students will need to look at shapes of the leaves, how many leaves are on the stem and if the leaves have teeth or lobes. The students will need to justify their classification scheme and groups. As a class, discuss the students' classification schemes and reasoning. Discuss that when a new species of plant is discovered scientists use existing classification schemes. The students will be using some today. (See performance assessment at the end of this unit to assess the students' learning.)

Instructional Procedures

Hand out the two different tree keys.
Model the process by showing a picture of one of the trees and walking through the choices.
Remember to state the similar and different characteristics of choices given.
Start with the tree diagram. Model the stops and tell about the characteristics and decisions you

make.

Look at the tree key. Explain and draw on the board each of the descriptions of trees. Model the same tree through the different key. Make sure you write down the steps it took to get the answer. Example 1b, 4a, 5a, 6b, 7a. (quaking aspen)

Divide the students into small groups. Give each group a picture and a sample leaf from the unknown tree and have the students practice determining which tree it is. The students can record their findings on the tree worksheet.

After five to ten minutes have the groups rotate the pictures and leaves.

When all the groups have seen the pictures and leaves, start a class discussion on the students' findings and processes.

In a journal, have the students answer the following question: Journal entry: What is the difference between existing classification schemes and creating your own classification scheme? If you found a new species, what scheme would you use and why should you use it?

Extensions

Science-

The previous activity can be made simpler by breaking up the two different classification keys into a two day activity. This would give the students more time to practice classifying the Utah trees. If you do this, you will need to bring in more pictures and leaves of Utah trees. *(ILO 1)*

For additional practice in classification have students classify Utah animals.

- [Classification key for Utah Animals](#) (pdf)
- [Utah Animals Classification Worksheet](#) (pdf)

Homework and Family Connections

Encourage students to check at home for any potato chips they might have to classify with family members.

As a family, walk around the neighborhood and pick leaves off some trees. Classify the leaves how you want. Put them on posterboard. Go to the library to find a book about trees. Find the leaves in the tree books and write their names under the leaves. You can make a key if you'd like. Bring to school to share.

Assessment Plan

An assessment for classifying leaves can be found at the end of the unit. You can use it as an assessment after the students have practiced with this activity.

Read notes written in the students' journals to see if understanding was accomplished.

Authors

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