TREE ID

iPad Dichotomous Key:

Each student iPad contains a copy of an interactive dichotomous key (found in iBooks) with the same identifying characteristics as the paper version of the key. The iPad key adds pictures and more information about each type of tree once properly identified.

Once students have opened the key on their iPads, explain to them that the basic process of identification is the same (read both options before choosing the most accurate). Once they have chosen the correct characteristic in the pair, students simply touch the underlined link on the right side of the screen next to their choice (for instance, Go to 13), and they should automatically be taken to the appropriate next set of options in the key. This process continues until the correct option will not link to another set of options but instead to a type of tree (for instance, Red Oak). If students "completed" the dichotomous key correctly, this option should be the type of tree they are trying to identify. Upon clicking, students will be taken to a page with a picture of the tree and some fun facts about it.

Swiping in the desired direction will manually go to the slide prior or next in sequence. If the students believe they have made a mistake at any point, they can hit the back button in the bottom right corner to return them to the last page they were on.

Let the students know before they start that the hyperlinks they will be clicking can be a little touchy, so they must be sure to click directly on the underlined section and to try again if it doesn't work on the first click.

LeafSnap:

While they are completing the course, have students collect and store one leaf from a tree they believe they have correctly identified (make sure they compare their chosen leaf to one still on the tree to ensure a match). Encourage them to choose a leaf that is as intact and complete as possible to ensure the best possible match. Near the end of the lesson, give each student a blank piece of white computer paper and have them lay their chosen leaf on it.

Next, students should open the LeafsnapHD application found on their iPads. When the app is open, students will click the "Snap It!" button in the lower right corner of the app's Home screen. The iPad camera should open and students will take a picture with their leaf centered in the frame of the camera. The application should then automatically scan the image of the leaf through its database (this requires WiFi and may lag slightly with everyone loading their leaf at the same time) and give a numbered list of most likely leaf matches. Students can look at the list and find the leaf that they think looks most similar to the one in front of them.

Does the leaf they chose in the app match the tree they identified on the course? The app is not always 100 percent accurate, so if the two don't match up, have students consider what could have gone wrong. Possible answers include human error in using the dichotomous key or shortcomings in the technology of the LeafSnap app. No matter what happened, a disconnect in answers is a great way to highlight the fact that errors happen in science and what goes wrong can tell us just as much as what goes right!

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