



4Rs Discovery Activity

KWHL Chart

The following is a K-W-H-L group activity that helps students think actively about what they are learning.

K: Stands for discussing with students what they *know*

W: Stands for helping students figure out what they *want to learn*

H: Stands for brainstorming with students *how they can learn more*

L: Stands for reflecting with students what they have *learned*

Procedure

Before Your Field Trip

1. As a way to get students to start thinking about the 4Rs before their field trip to the irecycle@school Education Center, give the 4Rs Quiz (provided in this packet). Emphasize that it is okay if the students do not know the answers to all of the questions.
2. Use the answer sheet to review the quiz with the students and to generate a class discussion. Display a blank KWHL chart and discuss with them what they know or think they know about the 4Rs (K). At this phase, all ideas should be accepted. Complete the (K) column.
Tips: *Have questions ready for helping students brainstorm.
*Ask students to explain their thoughts or associations that are vague or unusual. Ask "What made you think of that?"
3. Show students the 4 Rs Pictographs (provided in this packet). Using a chart that looks like the sample below, ask students to make predictions about the definition of each "R".
4. Based on what they know, lead students through setting goals of what they want to learn during their trip to the irecycle@school Education Center (W). Complete the (W) column.
Tips: *Ask students what they think they will learn on their field trip if they are not responding to the question of what they want to learn.
*Come prepared with a few thoughts of what **you** would like to learn to get the conversation started. Try to focus on topics that you think the students might not come up with on their own.
5. Ask students how they think they can learn the answers to their questions (H). Complete the (H) column.
Tips: *Make sure to discuss the irecycle@school Education Center and Doing the 4 Rs video!
*Take into account the resources available to your students and keep it simple. A quick trip to the library can often be the answer.

After Your Field Trip:

6. If there are any unanswered questions after your field trip, have students consult alternative resources to find the answers to their questions.
7. After the field trip and any follow-up research, ask students to list some of the things that they have learned (L). Complete the (L) column.
Tips: *Encourage students to include things that they learned or found interesting that were not included in the (W) column, rather than just answering the questions they started with.
*Use the irecycle@school Education Center Transfer Station poster and/ or 4rs Pictographs as a review.
*Have students code their answers by putting a check mark next to the questions they answered and a star next to information that they found interesting.
8. Discuss all of the information in the (L) column and reflect back to it when covering relevant curriculum.

<h2 style="text-align: center;">The 4 Rs: Reduce, Reuse, Recycle, Rot (compost)</h2>			
K: What I Know	W: What I Want to Know	H: How I Can Learn More	L: What I Learned
<ol style="list-style-type: none"> 1. The 4Rs stand for: Reduce, Reuse, Recycle and Rot. 2. We are supposed to recycle cans and bottles. 3. Recycling is good for the environment. 4. The garbage man takes away our garbage once a week. 	<ol style="list-style-type: none"> 1. What is rot? 2. Why is recycling good for the environment? 3. How much garbage goes to the landfill each day? 	<ol style="list-style-type: none"> 1. Visit the irecycle@school Education Center and Davis Street Transfer Station. 2. Watch “Doing the 4Rs” video. 3. Conduct research at the library. 4. Ask my parents. 5. Use the Internet. 6. Call a local expert. 	<ol style="list-style-type: none"> 1. Composting is nature’s way of recycling. It is called decomposition and is mostly done by microorganisms and invertebrates. 2. Recycling helps to conserve the earth’s resources by taking something and making it into a new product rather than just throwing it away. 3. Alameda County sends about six million pounds of garbage a day to the landfill. 4. A bale of aluminum cans contains 53,000 cans!

irecycle@school Education Center

2615 Davis Street • San Leandro, CA 94577

Phone (510) 563-4282 • Fax (510) 563-4205 • edcenter@stopwaste.org

Word	Predictions of Meaning	Actual Meaning	Sentence
Reduce			
Reuse			
Recycle			
Rot			
Natural Resources			