

## ACTIVITY 3: CLASSIFICATION AND GROUPING GAME

In this activity, students will play a game to learn about how scientists classify and group organisms based on their traits and have to make systematic decisions.



*Image Credit: Gary Abud, Jr.*

The whole group will be provided a set of game cards—one card per student—and they will have the task of working together to put all of the cards into groups of 4 based on which items on the cards they think go together. *The challenge is some items can be classified in multiple groups.*

This activity practices a variety of scientific skills including—among others—communication, evaluation, developing and using models, and collaboration. Just like scientists use the features of organisms to classify them and group them together, students will have to consider the properties of each item on their cards—including doing some outside research in some cases to learn more about each card—until they can determine how to group all of the cards.

### The Rules of the Game

1. All cards must end up in one group
2. All groups must contain exactly four members
3. Students may not trade cards with others
4. Any student in the room may talk with any other student in the room about their cards
5. Students go to the group where their card belongs, but they may switch groups as they get more information
6. Students may do Internet research, as needed, to learn more about the item on their card
7. A rationale must be provided for each group's final selection of members

### Materials

- Dry erase boards/chart paper and markers
- Devices to access the Internet for research
- Set of grouping cards (see **Teacher Handouts**)

### Setup / Procedure Notes

1. Review the **Teacher Handouts** and prepare the game cards ahead of time.
2. There are multiple connections to make between items to form partial groups, but only one classification will group all the cards.

First, explain to students that they will be conducting a classification activity by playing a game where they will group things according to their properties. Let them know that groups of four items can be made by making connections between the properties of different items.

Next, distribute one item card to each student face down. Tell them not to peek until after everyone gets their card. Inform them that the items written on their cards have three other items that can go with them to form a similar group based on their properties. It's their job to work together and figure out which sets of cards should go together to form a group.

Then, distribute the visual medium that they will use to show their rationale and keep track of any information as they form their group. Whether you're using dry erase boards, chart paper, or some other medium for students to share their rationale for their grouping, inform them that the goal is to make their thinking visible about how they arrived at their grouping. Explain the rules to the game and check for understanding with a few students.

Last, allow students time to work together to figure out how they will group their cards. Inform them that there is only one configuration that will allow all the cards to be in a group such that there are four groups.

### Making Thinking Visible

Remind them that for making their thinking visible to show how they grouped their cards, they will want to have a **claim** (which cards go in the group) based on **evidence** (what features they considered) and **reasoning** (how those features connect within this group better than any other group).

Once all the groups have formed and have their set of members finalized, give students time to show their thought process visually before giving each group time to present to the whole group and explain their thinking. Give students the option to respond or ask questions as they hear from each group and more information arises about the sets of items.