



## **Classroom Teacher Preparation**

### **Scientific Practices 4: The Classification Challenge**

**Please use the following to prepare for the next SfS lesson.**

#### **Description**

We classify things on a nearly daily basis, as a way to organize observations, describe relationships between different things, and communicate clearly with others. In this lesson, students will understand the importance of classification in scientific practices and will come up with their own classification system for a collection of random objects.

#### **Lesson Objectives – SWBAT (“Students Will Be Able To...”):**

**3<sup>rd</sup>-8<sup>th</sup>**

- Understand the importance of classification for scientific practices
- Classify objects based on their physical properties
- Practice their classification skills

#### **Disciplinary Core Idea (DCI):**

- No DCI applies

#### **Science & Engineering Practice (SEP):**

*Constructing Explanations and Designing Solutions*

#### **Preparation:**

This lesson is an introduction to the topic, no preparation needed.

#### **Room Set Up for Activities:**

Students will be working in pairs at their desks/tables. Ideally the teacher pairs up the students before class.

#### **Safety:**

No safety concerns for this lesson, but students will manipulate an assortment of small objects, so please advise them not to play with them and to avoid losing them.

#### **Related Modules:**

*This lesson may be taught as part of a sequence or group of related modules on Scientific Skills. Modules include:*

*Scientific Practices 2: The Observation Challenge* – This lesson challenges student’s observational skills - one of the most important basic science process skills. Students will learn how to distinguish between subjective vs. objective observations and between quantitative vs. qualitative observations while describing a mystery box item.

*Scientific Practices 3: Mystery Tubes* – Focuses on the importance of models in science. Students observe a “mystery tube” and then build models to understand how it works.

For other module sequences and groups, look here: [www.sciencefromscientists.org/sequences](http://www.sciencefromscientists.org/sequences)



## Standards Covered:

Please click the following link to our website to review the standards covered by our lessons, listed by state:

<http://www.sciencefromscientists.org/standards/>

Lessons are matched to both national NGSS and local state standards.

**Note:** While this lesson doesn't directly adhere to NGSS standards, the content taught provides foundational scientific skills. Classification skills are very important in science because they help researchers keep organized and better understand and communicate their subject of interest. Classification helps categorize things and all living organisms so that we know what they do and how they are similar or different.

## After Our Visit:

*Extend this lesson with an interactive online that challenges student to identify and classify animals according to their physical characteristics and behaviors*

Access this Extension activity by visiting the Classroom Post found on our website at [sciencefromscientists.org/cohorts](http://sciencefromscientists.org/cohorts). Use the name of your school/cohort and password to log in.

To help Evaluate, check out our Open Response questions online at [sciencefromscientists.org/open-response-questions](http://sciencefromscientists.org/open-response-questions). They are freely available for all of our lessons for current teachers. Use the password supplied by your instructor to log in.

## Additional Resources:

- Taxonomy of Candy video (6:31): <https://www.youtube.com/watch?v=t3amU3RrX9g>

**WGBH Videos and Activities:** The PBS educational site is a great, **free** resource for educators but you must create an account to use the materials. The first time you log in to the [PBS Learning Media](http://PBS Learning Media) website you will be asked to create an account and provide an email and password. Once you have logged in, select "keep me logged in" to avoid having to repeat the process.

- Online activity "Unity of Life": Students learn how classification schemes are used to illustrate the relationships among organisms and, ultimately, the unity of life:  
[http://mass.pbslearningmedia.org/resource/tdc02.sci.life.div.lp\\_lifeunity/unity-of-life/](http://mass.pbslearningmedia.org/resource/tdc02.sci.life.div.lp_lifeunity/unity-of-life/)