



## DANCING RICE

### OVERVIEW

In this activity, the campers will learn about chemical reactions and make a fun mixture that causes rice to dance!

### TOPIC AREA(S)

- Chemistry
- Chemical reactions
- Chemical Energy

### GRADE LEVEL

1-2 or 3-4 (Sprockets will need more help to measure the proper amounts of baking soda/vinegar)

### QUESTIONS PRIOR TO THE LESSON/GETTING EXCITED

- What is a chemical reaction?
- What do we use chemical reactions for?
- Do you think that chemical reactions happen in your body?
- What do you think a good example of chemical energy is?
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### BACKGROUND INFORMATION FOR INSTRUCTORS (INCLUDE QUESTIONS W/ ANSWERS)

A chemical reaction is a process that in which one or more substances/materials is converted or changes to another substance. There are literally thousands of chemical reactions that occur everywhere, all the time. For example, to obtain the energy we eat from food, your body has to perform a bunch of different reactions to turn the food we eat into usable energy for the body, most commonly in the form of ATP.

Chemical reactions are very useful to us in industry as well. A great example of this is the production of plastics and other similar materials. These materials are usually made using a method known as polymer chemistry, where a bunch of tiny molecules (called monomers) combine to form a very big molecule called a polymer. Another great example is using reactions for chemical energy. Chemical energy powers tons of stuff in our society and is super important for us to function. By far the best example of chemical energy is the standard lithium battery that we use to power most of our electrical household objects.



<b>RELEVANCE TO THE CURRICULUM</b>			
<b>Grade 1 and 2</b>	<b>Grade 3 and 4</b>	<b>Grade 5 and 6</b>	<b>Grade 7 and 8</b>
Needs & Characteristics of Living Things Growth and Changes in Animals Materials, Objects and Everyday Structures Movement Energy in Our Lives Properties of Liquids and Solids Daily and Seasonal Changes Air and Water in the Environment	Growth and Changes in Plants Habitats and Communities Strong and Stable Structures Pulleys and Gears Forces Causing Movement Light and Sound Soils in the Environment Rocks and Minerals	Human Organ Systems Biodiversity Forces Acting on Structures and Mechanisms Flight Properties of and Changes in Matter Electricity and Electrical Devices Conservation of Energy and Resources Space	Interactions in the Environment Cells Form and Function Systems in Action Pure Substances and Mixtures Fluids Heat in the Environment Water Systems

- MATERIALS (SPECIFY WHETHER PER CAMPER, GROUP OR CLASS)**
- Per Camper:**
- **White vinegar**
  - **Baking soda**
  - **Instant rice (must be instant white rice) – ¼ cup**
  - **1 Clear Jar**
  - **Water**
  
  - **Food colouring (optional)**



### **SAFETY CONSIDERATIONS**

Practice caution adding in the baking soda, as the reaction can become vigorous

### **PROCEDURE**

- 1) **Fill a clear jar  $\frac{3}{4}$  of the way with water, if desired/available add in any colour of food colouring you want**
  
- 2) **Add in 1 tablespoon of baking soda to the jar and mix in completely**
  
- 3) **Add in  $\frac{1}{4}$  cup of uncooked instant rice. Must be instant/pure white rice as anything else will be too dense for the reaction to occur**
  
- 4) **Add in 1-2 tablespoons of white vinegar**
  
- 5) **Enjoy!!!**



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**REFERENCES**

<https://www.greenkidcrafts.com/dancing-rice-experiment/>