

## Objectives

- Learn different types of clouds, and how we name and identify them.
- Learn the steps of the water cycle, and create a model that will allow them to observe steps at home.

## Materials

- Cotton balls
- glue
- ziploc bags
- blue food coloring
- permanent marker
- tape

## Introduction

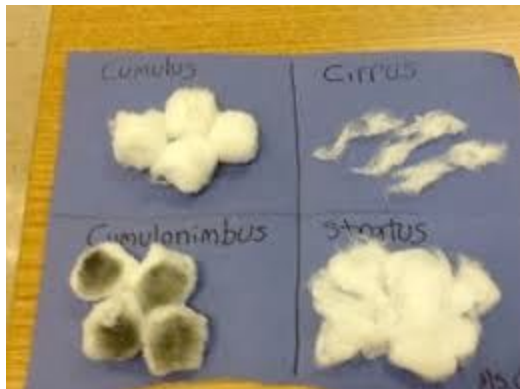
Introduce the water cycle - (this might be a reminder? I think they've probably discussed it by this point in class). Some videos to draw from:

<https://www.youtube.com/watch?v=Mcw2KgS7dHo>

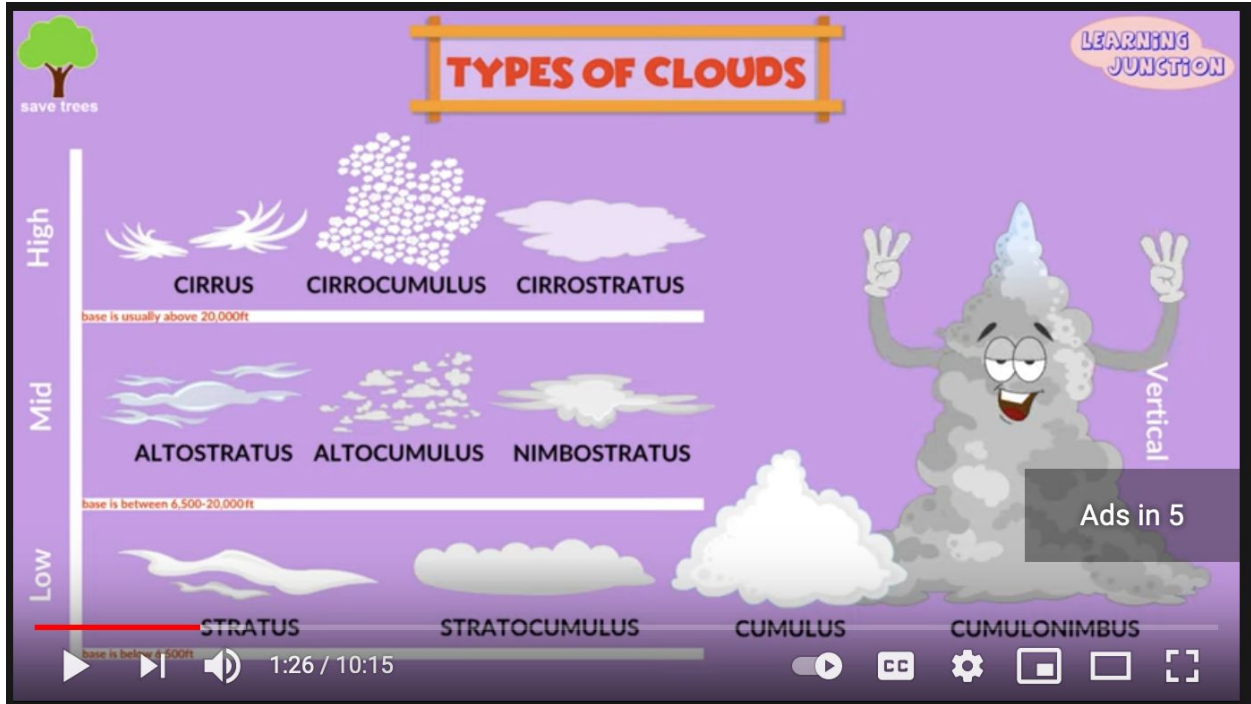
<https://www.youtube.com/watch?v=FMagDRCpJ14>

## Activity 1

Cloud types



(adapt this to include cloud height!)



1. Have the students fold their paper into four pieces.
2. See if they can name the types of clouds, and label each corner.
3. They can use the cotton balls and glue to create each cloud. As they're making their clouds, ask them what features you can use to tell clouds apart. What are the differences between stratus and cumulus clouds? What about cumulus vs cumulonimbus?

## Activity 2

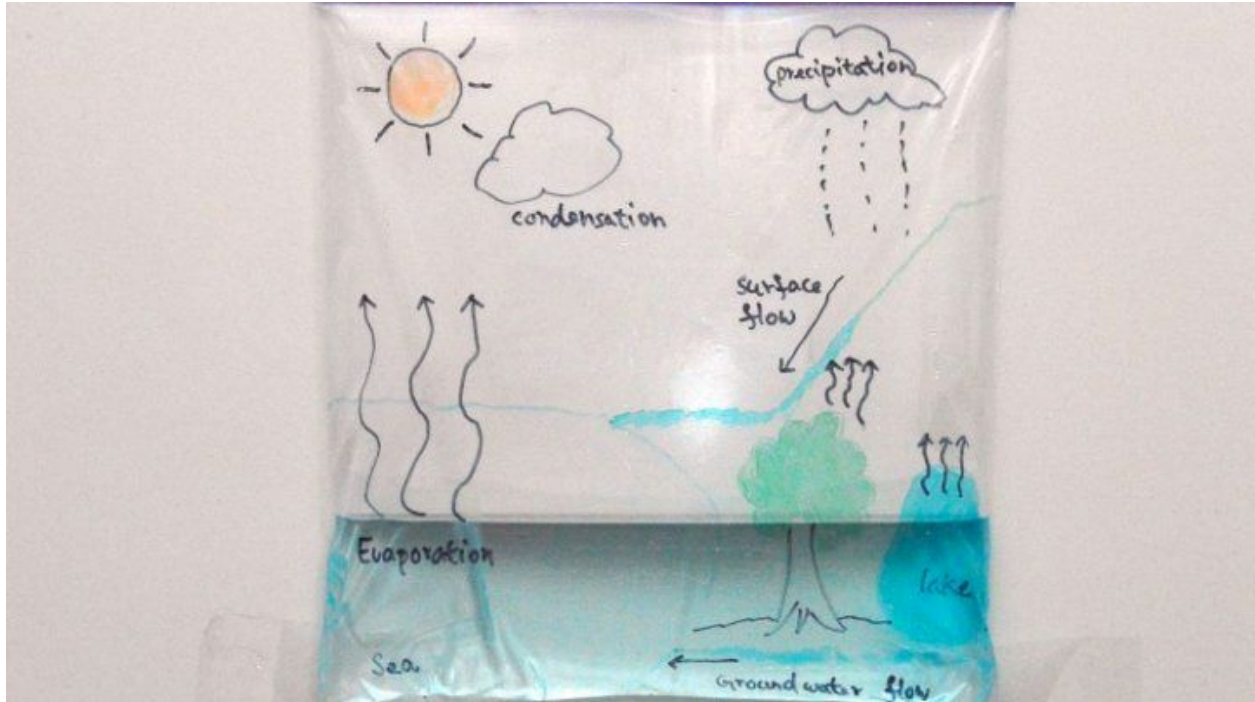
Water cycle ziploc bag

<https://www.mobileedproductions.com/blog/how-to-make-a-water-cycle-in-a-bag>

Have the students use the permanent marker to draw the water cycle on the ziploc bag. Some key terms to include:

- evaporation
- condensation
- precipitation
- transpiration
- sun
- ocean/groundwater

You can show them the picture/the slide if you like, but it might be nice to have them talk through the important pieces without a visual, since I think at least some will have learned this before. It's nice to emphasize that the driver of this whole process is the sun.



They can then go add a bit of water to the bag. They have a portion of blue food coloring - they won't need to add all of this (unless they want **very** dark blue water), so have them add slowly until it's the color they want.

They can then tape the bag up to a window. This will be a take home experiment, because it takes a few hours for water to evaporate and condense at the top of the bag. This might also be tricky this time of year - for best results, tell them to put the bag in a window that gets direct sunlight, and to check it multiple times a day (particularly if there's a sunny day this week!)

### **Outro**

Pull students back from break out rooms with 5 minutes left to share their water cycle model.