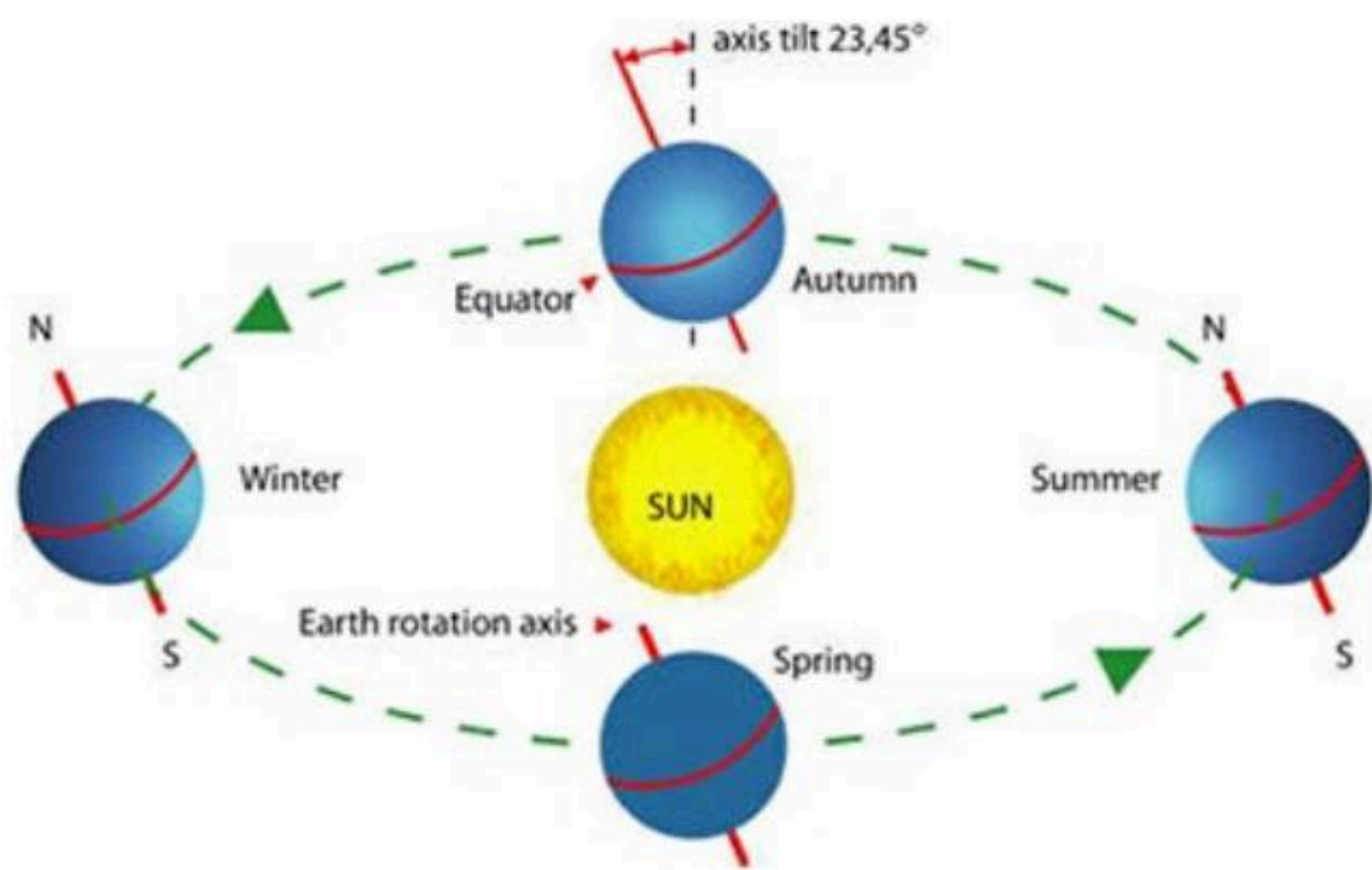


Science of the Seasons

What's responsible for seasonal changes?
Use these resources to find out!

Step 1: Watch the short video about why we have seasons at <https://tinyurl.com/w2r4w9k>

Quick answer: *Earth has a tilt which causes different parts of the globe to be closer or farther from the sun. Ohio is in the northern hemisphere. When it's winter in Ohio, the north pole is tilted away from the sun. When it's summer in Ohio, the north pole is tilted towards the sun. The seasons are reversed for those living in the southern hemisphere. It's strange to think that - while we have a hot summer - Australia is having a cold winter!*



Step 2: See for yourself! Mimic Earth's tilt by using a sphere of any size (such as a ball). Make two dots on opposite sides to represent the poles. Using a lamp as the "sun," tilt the top pole towards the light (see A). You created summer in Ohio! Now, without rotating your body or adjusting the ball, step to the other side of the light (see B). Now, Ohio's experiencing winter.



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More in-depth explanations of the reasons for the seasons:

Video from MIT K-12

<https://www.youtube.com/watch?v=Pgq0LThW7QA>

Video plus tools for further inquiry from TEDEd

<https://ed.ted.com/lessons/reasons-for-the-seasons-rebecca-kaplan#watch>

A



B



Weather vs. Climate

Step 3: Earth's position around the sun is one major cause of the temperature outside. This can influence the type of weather we have.

Watch the next short video about the difference between weather & climate.

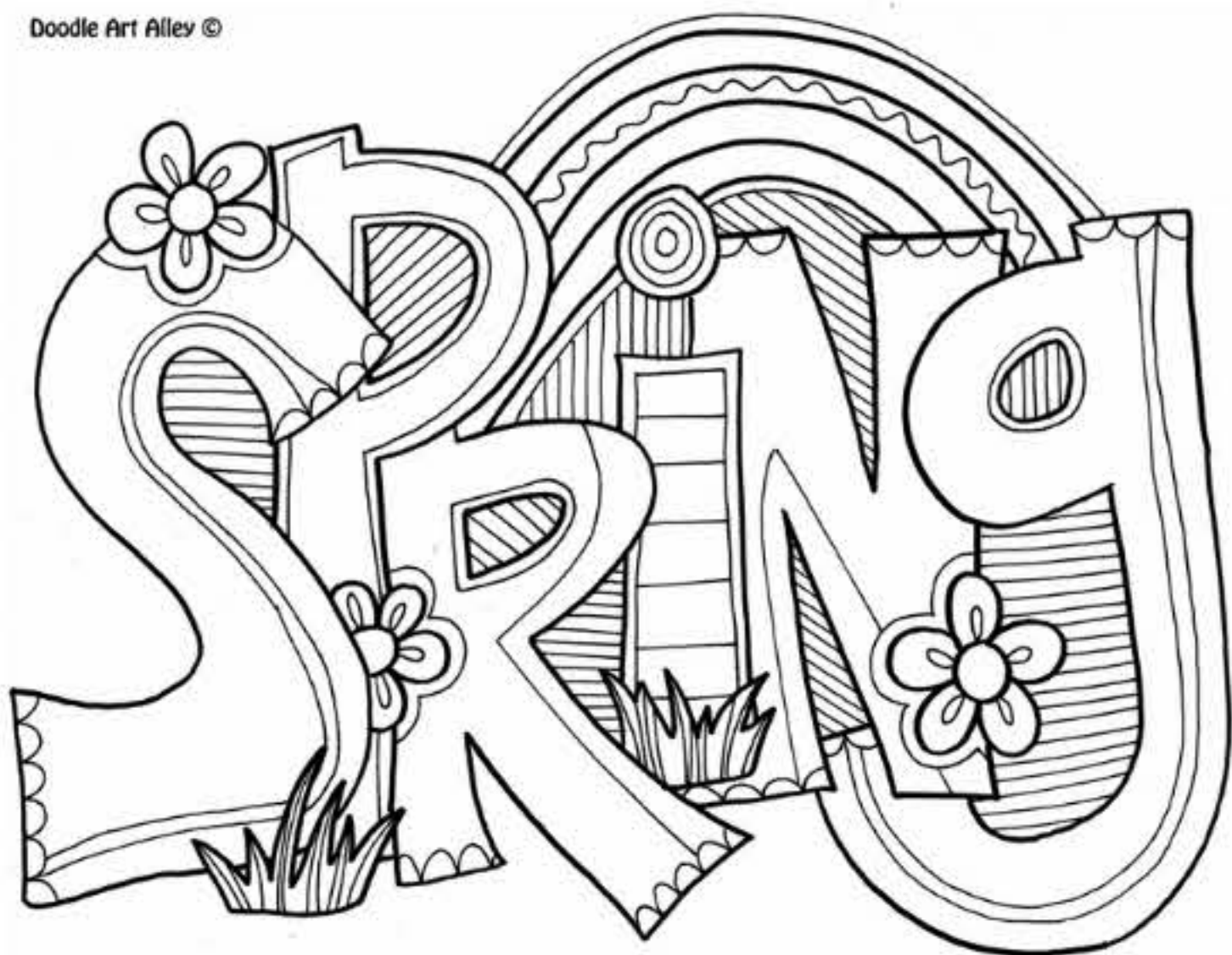
<https://climatekids.nasa.gov/weather-climate/>

Step 4: Now that you know the difference between weather & climate, play an interactive game at NASA!

<https://climatekids.nasa.gov/menu/play/>

FOR MORE FUN

Doodle Art Alley ©



Color the SPRING page at <http://www.doodle-art-alley.com/uploads/2/6/1/6/26162462/springword.pdf>

Scan it or take a picture and share it with
Gahanna Parks & Rec!



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Take this lesson up a notch for older kids with sun s'mores! Follow NASA's directions to make a solar cooker at

<http://climatekids.nasa.gov/smares/>

Once you've finished s'mores, experiment with other items. Can you make water hot enough for tea? Can you melt cheese? How thin and what type does the cheese need to be to melt? Can it cook an egg?

Teens can explore even more! You have a basic solar cooker, how can you make it better? Research different designs and what you might be able to change to improve the basics. Are there certain colors that absorb heat better? How much reflective surface does it need? Is the heat escaping? Don't forget to stay safe with protective gear such as tongs and oven mitts when moving things in the cooker.