SCIENCE FESTIVAL FAMILY EXPERIMENT GUIDE: STICKY ICKY

Instructions:

Adult: In your plastic cup, mis 1Tablespoon of plain warm water with 1 tablespoon of white glue.

Student: Stir well with a popsicle stick. Tell your partner which color you want your sticky icky slime to be.

Adult: Add a 3-4 drops of food coloring to the glue and water mix.

Student: Stir well with a popsicle stick, keep stirring during the next step

Adult: Slowly pour 2 teaspoons of the Borax solution into the glue and water mixture.

Student: Keep stirring until there is no liquid left, Enjoy!

Questions for after:

K-2nd Grade:

- What did you see happen to the glue and water as more things were added?
- Why do you think that happened?
- Did the sticky icky slime change as you stirred it?

3rd-5th Grade:

- Why do you think we needed to add the Borax solution?
- Is your sticky icky slime a solid? a liquid? Or a little of both?
- What did you notice happened to the substance as you stirred it?

How It Works:

The glue and water mixture contains chains of molecules, called “polymers,” which move relatively freely as a liquid. When the Borax solution is added it adds crosslinks to the polymer chains, restricting their movement. It is this molecule in the Borax solution that causes the liquid to turn into slime.

Vocabulary:

Polymer: A natural or synthetic (man-made) substance made from joining together many small molecules or units.’ Poly’ means many and ‘mer’ means units.

Solution: Two or more substances mixed evenly together

Real-World Application:

One characteristic of polymers is that—like Sticky Icky—they can easily take a variety of shapes. We see polymers all around us: in our plastic toothbrushes, cell phone cases, rubber-soled shoes, and even synthetic fabrics made into clothes and sheets! Knowing about polymers is useful in many STEM jobs from understanding DNA to designing smartphones.