GYSTC Discover Georgia STEM Camp:
Week Two: Day Three
Title: Iggy Peck
Presenter: Emily Ann Strickland

Purpose:	Students will use provided materials to develop a structure that will withstand movement in Earth. A teacher or parent will shake a table or the gelatin dish at a controlled rate for a specified timeframe. After completing this activity, students should be able to evaluate different models of structures. They will be able to describe how different aspects of structures may be advantageous if an earthquake were to occur.
Standard:	**S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.** c. Ask questions to obtain information on how technology is used to limit and/or predict the impact of constructive and destructive processes.
Materials:	☐ Table ☐ Gelatin in a clear Pan ☐ 30 Toothpicks per group ☐ 30 Marshmallows or roll out playdough into 30 round balls ☐ Lab notebook ☐ Phone/iPad for taking pictures (optional) ☐ Iggy Peck Architect book or read aloud ☐ iPads or computer for researching
Procedures:	Prepare your gelatin in plastic Tupperware (I bought mine from the dollar tree- Surefresh square container and lid-10 cups (81fl oz) 2.3L) Make sure you use 1 packet of gelatin (Knox or Great Value), place in fridge and let it set up. Get toothpicks and 30 marshmallows or roll playdough into 30 small round balls. Build a structure with the toothpicks and marshmallows. ****(DO NOT stick toothpicks into the gelatin!)

Science Behind It:	**Authentic Scenario (Phenomena):** **How do earthquakes occur?** Earth's crust is comprised of many plates that can move away from each other, toward each other, or slide past each other. When these plates move, they can cause different types of land and ocean features as well as hazards. Earthquakes occur when rock underground suddenly breaks along a plate boundary. This sudden release of energy causes the seismic waves that make the ground shake. **Can we predict earthquakes?** Scientists know where an earthquake is most likely to hit, but they still cannot tell exactly when it will happen. They have tried many different methods to predict earthquakes, but none have been successful. **How do buildings resist earthquakes?** No structure can be entirely immune to damage from earthquakes. Structures should be strong and ductile enough to survive the shaking with an acceptable damage. They might also be constructed with base isolation or using structural vibration-control technologies to minimize any forces.
Questions to Ask:	1. What are some events on Earth that take a long time to happen? (Rivers being carved, rocks breaking down, etc.) 2. What are some events on Earth that happen quickly? (Floods, earthquakes, volcanic eruptions, etc.) 3. What things were alike in the structures that survived the earthquake? 4. What things were alike in the structures that did not survive the earthquake?