

2019 DeKalb Elementary Science Olympiad Event Clarifications – Updated on 03-05-2019

Fernbank Science Center assembles quizzes and activities for the DeKalb County ESO. We cannot promise perfect agreement with clarifications issued for any other Olympiad, including the Georgia ESO.

Event Name	2019 State Event	Comments
1. Backyard Biologist (DeKalb Modification)	*	<p>This event does not appear in the Science Olympiad Manual. Use only the DeKalb Modified rules provided to your Head Coach. The DeKalb lists of Birds, Trees, and Shrubs / Vines / Flowers all differ slightly from those for the GA ESO.</p> <p>Our Practice Tip Sheet for <i>Leaf and Tree Finder</i> is useful for this event.</p> <p>Tie Breaker: Pre-selected questions.</p>
2. Barge Building	*	<p>Note the metric units – the aluminum foil squares are 15 cm x 15 cm. (That's only about 6" on a side.) Any type of aluminum foil will work. We do NOT specify the type, so be sure your students practice with both thinner and thicker products. Teams that damage or tear their 1st sheet may request a 2nd, but they will be ranked below teams who used only a single sheet.</p> <p>Students may bring and use their own scissors and ruler; we do not provide these for this event.</p> <p>Students must produce their estimate for predicted weight by hand (no calculator). We provide students with the mass of each piece. You may want to have your students practice converting their predicted mass into the corresponding number of pieces.</p> <p>Students may load / select the exact placement of each weight.</p> <p>Things to consider: Will it matter if weights are placed in the corners first, for example, or is it best to stack them in the middle? What if the weights are round things that roll, like marbles?</p>
3. Bridge Building	*	<p>We provide 1 meter of blue painters tape to each group. We will have scissors on hand, or students may bring their own. Students may bring a ruler if they like, but we do not provide those.</p> <p>ANY type of bridge is acceptable – it does not need to meet the technical definition of a suspension bridge.</p> <p>Students MUST stop building after the 30 minute build period. Our typical starting span for testing is 25 cm, increasing in 5 cm increments unless teams request a smaller increment as maximum spans are approached.</p>

4. Crime Busters	*	<p>Students must bring their own splash-proof goggles and a suitable lab coat or covering. Iodine stains clothes! We provide plastic well plates (either 12 or 24 wells) for students to use during powder identification, or students may elect to use a sheet of clear plastic wrap.</p> <p>Student may NOT bring in any sheets, including guides to go underneath their powder test locations.</p> <p>Students do not need to make fingerprints, only identify prints “found at the scene” by comparison with copies of fingerprint cards from the suspects.</p>
5. Data Crunchers (DeKalb Modification)	*	<p>This event does not appear in the Science Olympiad Manual. Use only the DeKalb Modified rules provided to your Head Coach. Students will rotate through stations on a fixed time rotation.</p>
6. Deep Blue Sea	*	<p>Although we will also feature ocean animals, plants, and physical features related to the Georgia coast, we do not limit our questions to this area as they will at the Georgia ESO.</p>
7. Disease Detectives	*	<p>A Practice Tip Sheet is available on FSC site.</p>
8. Don't Bug Me		<p>A Practice Tip Sheet is available on FSC site.</p> <p>We allow participants to bring in a single student-made key. All text must be hand-written. We will allow both hand-drawn images and printed pictures that are physically cut-and-pasted onto the key. (No printed images may have any text on them.)</p> <p>The format for a “key” is flexible: a small poster, drawings and notes on a single large piece of paper, or a short booklet of 2-3 sheets of paper (both sides) are all acceptable. Print-outs of our Practice Tip Sheet are not acceptable as a key. Note: The Georgia ESO will not allow keys.</p>
9. Metric Mastery (DeKalb Modification)	(*)	<p>Use only the DeKalb Modified rules provided to your Head Coach because we also include a shortened version of <i>Grab a Gram</i> in our version. (The latter is a 2019 GA ESO event.)</p>
10. Mystery Architecture	*	<p>We allow a 30 minute building time after which all groups must stop. (The manual provides only 20 minutes.)</p> <p>Students may bring their own scissors, rulers, and pliers. We do not supply these.</p> <p>A Practice Tip Sheet is available on FSC site.</p>
11. No Bones About It	*	<p>No clarifications.</p>
12. Paddle Boat Construction (DeKalb Modification)		<p>Use only the DeKalb Modified rules provided to your Head Coach. We allow two runs as long as the second starts within a 6-minute window. We provide #64 rubber bands. All teams must use new rubber bands that we provide them with at the event.</p>
13. Paper Rockets	*	<p>We treat the Rocket Design provided in steps 1 – 6 as a suggestion. Teams may create alternative designs that use only the paper provided. Teams may choose the best dimensions and placement for fins. All launches must conform with step 9, however, with a launch produced by blowing through the straw (no throwing, for example).</p>

(Paper Rockets, cont.)		<p>Note: GA ESO appears to interpret this differently and implies that they will only allow rockets that look like Figure E on the description.</p> <p>All teams can make two rockets, but you only fly one – choose whichever works better. Students will have 20 minutes to build. If they finish early, they test only in the designated area. All teams get a brief test period after the building period.</p> <ul style="list-style-type: none"> • Do not mess around with your rocket. We will disqualify teams that launch at anybody. • No design or printed guidelines may be used – memory only! • Both members of your team must launch the same rocket.
14. Pastamobile (DeKalb Modification)		<p>Use only the DeKalb Modified rules provided to your Head Coach. We have two different ramps and will allow two runs on each. (Only the better distance counts on each ramp.)</p> <p>Our DeKalb rule modifications are intended to encourage students to think more deeply about engineering changes that might make their racer work better. The Event Judge will make all determinations about possible violations related to materials.</p>
15. Picture This		<p>A Practice Tip Sheet is available on the FSC site.</p> <p>Both students who are not currently sketching are allowed to guess at each term. We allow either the current “sketcher” or the current “guessers” to pass on a term. Students will rotate in a fixed order.</p>
16. Propeller Propulsion (DeKalb Modification)		<p>Use only the DeKalb Modified rules provided to your Head Coach. We allow either an airplane or a helicopter. Teams must use the same vehicle on both launches. Each team’s longer time will be used on scoring.</p> <p>Our DeKalb modifications to the rules are intended to encourage students to think more deeply about engineering changes that might make their vehicle work better.</p>
17. Rock Hound	*	<p>We allow participants to bring in a single student-made chart. All text must be hand-written. We will allow both hand-drawn images and printed pictures that are physically cut-and-pasted onto the chart. (No printed images may have any text on them.)</p> <p>The format for a “chart” is flexible: a small poster, drawings and notes on a single large piece of paper, or a short booklet of 2-3 sheets of paper (both sides) are all acceptable. We collect charts used during each session, however, students may request their return following the Olympiad.</p>
18. Simple Machines		No clarifications.
19. Starry, Starry Night	*	Students should expect to encounter BOTH constellations with stars connected by line segments and photos or representations without connecting segments. Nobody needs to bring a red penlight; our rooms do not get that dark.

20. Straw Egg Drop	*	<p>The building period lasts for 20 minutes. We will be using the following "Egg Rules" this year:</p> <ul style="list-style-type: none"> • Each team gets 1 egg in a baggy. Eggs MUST stay in baggy. • Students insert their own egg. • Students may ask for their egg at any time. Once they take possession, it is their responsibility to keep it safe! (We give the students their egg in a cup to prevent it from rolling off the table.) • No tape may be attached to the egg. • All eggs must be inserted BEFORE the 20 minute period ends
21. Straw Tower		<p>We do NOT use pins. We provide 1 meter of masking tape or blue painters tape for each group. We provide scissors to groups that want them. We will use a 25 minute building time limit.</p>
22. Tennis Ball Catapult		<p>No clarifications.</p>
23. The 24 Game (DeKalb Modification)	*	<p>This event does not appear in the Science Olympiad Manual. Use only the DeKalb Modified rules provided to your Head Coach.</p> <p>Practice cards are available from Suntex International, Inc. (www.24game.com)</p> <p>#33976 Four operations / Single digits #39976 Four operations / Double digits (Both are sets of 96 cards.)</p> <p>For the DeKalb ESO, we will allow students to write three separate lines for their "number sentences" or to use parenthesis to delimit the same. Allowed examples for a card with 5, 8, 4, and 7:</p> <p>(1) $4 + 8 = 12$ (2) $7 - 5 = 2$ (3) $12 * 2 = 24$</p> <p>OR $(4 + 8) * (7 - 5) = 24$</p> <p>Parentheses are REQUIRED to delimit the number sentences EVEN IF result would be correct in their absence based on applying the Order of Operations principles. As an example, here is a correct mathematical statement that is NOT acceptable by DeKalb ESO rules:</p> <p>$4 + 8 + 7 + 5 = 24$</p>
24. Water Rockets	*	<p>Parachute required. 1 m max height. No metal parts other than a small snap swivel. For Construction Rule #3, we do NOT require a straw to be attached vertically to the bottle.</p>
25. Weather or Not	*	<p>No clarifications.</p>
26. Which Way's North?	*	<p>A Practice Tip Sheet is available on the FSC site. Beginning with our 2019 Olympiad, we will use GDOT's 2017-2018 Georgia roadmap. All Head Coaches received two copies to retain for future practice.</p>