Word Problem Wizardry:

1. The link on SRVSO Theory Event Resources page links to AMC 8. Since this is an elementary level competition, I am wondering if we are going to test the kids at AMC 8 level. Will the format of the challenge mimic AMC 8? For context, *the AMC 8 is a contest for students in grades 8 and below, hosted annually by the American Mathematics Competitions (AMC) to students all over the United States.*

For the theory events, we will be consulting elementary-level teachers to ensure fourth- and fifth- grade students are able to complete the event.

2. Thank You for the sample questions. It looks like the quiz will be for 45 minutes. Can you please confirm that the test is 45 minutes. The Theory Event Resource page says 30 minutes. Please clarify

All theory events will be 30 minutes in length.

3. How do we determine which team won? Do they compete through elimination until they reach the finals and eventually win? OR are we awarding the win to the team that won the highest points? What happens if there is a tie? Will the two teams compete again? Can you please clarify the format of the event.

The team with the highest point totals rank highest. If there are ties, we do have formulas designed to break tie-breakers. Unfortunately, at this time we are unable to divulge the formulas. However, I can say that there would not be multiple tests/face-offs.

4. I assume the kids will work together to answer the questions in the 30 or 45 minutes. Do they have free response, multiple choice, or fill in the blanks? Does the spelling and the notations in the math count towards the answers? For example, 12 inches or 12 meters/second instead of 12 as an answer.

The theory events are a mix of mostly multiple choice and some short free-response questions. We manually go over tests, so as long as the word is

discernible you should receive credit. However, spelling may possibly be used as a tie-breaker.

5. Is there a guide they have to reference as topics for the challenge? Or is it anything from Grade K to 8? Can you please provide more clarity on the scope of the challenge.

Unfortunately, we are unable to go into details. I can only advise you to look through the srvso.org website and check the resources on there.

A Broader World:

6. The link on SRVSO Theory Event Resource page refers to AP/College Environmental Science. The AP level is generally for High School kids. The reference to Khan Academy and College Board may be too high for kids in elementary grade. Can we know what grade level the teams will be assessed at please?

As stated above, all material will be cleared as acceptable for fourth- and fifth-grade students by elementary school teachers within the district.

7. Thank You for the sample questions. It looks like this quiz will also be for 45 minutes. Can you please confirm if the test is for 45 minutes. The Theory Event Resource page does not provide duration. However the other ones have 30 minutes. So I assume this is also a 30 minutes contest. Please clarify.

All theory tests are 30 minutes in length.

8. Is this similar to the AMC 8 format? The sample questions have multiple choice and free text. Are we expecting the test to be similar?

The test will have mostly multiple choice questions, with some free response questions mixed in.

9. Does the spellings and notations count in this as well? Will kids lose points if the spellings are incorrect? Are there definitions they need to know and will they be asked to define things?

The theory events are a mix of mostly multiple choice and some short free-response questions. We manually go over tests, so as long as the word is discernible you should receive credit. However, spelling may possibly be used as a tie-breaker.

10. Is there a guide they have to reference for this challenge? Or is it open ended to know how much knowledge kids have on this subject?

We encourage students to look through the resources on the srvso.org website to gain knowledge on their subject.

11. Is this elimination type or points scored in one round only? Can you please provide more clarity.

The theory event will be a multiple-choice and free-response question test.

Don't Bug Me:

12. In the original presentation (slides), you referred to five classes of bugs. We are still waiting to hear back from you on which classes of bugs to focus on. Can you please provide clarity and publish this on the website.

At this time, I can only recommend reading through the resources listed on the srvso.org website.

13. The link on SRVSO Theory Event Resources page links, you have multiple choice questions in the resources but the sample questions are all free text? Will we have both multiple choice and free text please?

The theory event will be a multiple-choice and free-response question test.

14. Thank You for the sample questions. It looks like the quiz will be for 15 minutes. Can you confirm that the test is 15 minutes or 30 minutes please. The Theory Event Resource page says 30 minutes. Please clarify.

All theory tests are 30 minutes in length.

15. Will this also be an elimination round or one test to review the points earned by the team? Can you please elaborate on the test / challenge format please?

The theory event will be a multiple-choice and free-response question test.

16. Does the spellings and notations count for this test as well please? Will kids lose points if they spell incorrectly? Are definitions part of the test?

The theory events are a mix of mostly multiple choice and some short free-response questions. We manually go over tests, so as long as the word is discernible you should receive credit. However, spelling may possibly be used as a tie-breaker.

17. Is there a guide for kids to reference for this challenge? Or is it open-ended to gauge the depth of the kid's knowledge in this subject? Please clarify.

We encourage students to look through the resources on the srvso.org website to gain knowledge on their subject.

18. Will the kids be asked to identify any bugs / insects for the event? I assume there won't be any physical (dead) bugs / insects they have to review as part of the contest.

There will not be any dead bugs to identify. We cannot give information regarding specific test content, but if a teacher would deem identifying a certain type of bug possible for fourth- and fifth- grade students, that could be a possible question on the test.

Barge Building:

19. In the original presentation (slides) and in the Coaches zoom call, we talked about building the barge. However, I haven't seen any reference to the size of the barge? Is there a limit to the length, width, weight of the barge? Can you please provide more clarity.

There are no set limits to the dimensions of the barge, as long as they are within reason (approximately the size of a shoebox)

20. In the Build Event Resources page, there is a reference to Popsicle Sticks as material. Do we have a limit to the number of popsicle sticks we can use please? Is there a type of popsicle stick we should use? Is there a size and length of each popsicle stick that we should adhere to please?

There is no limit to the number of popsicle sticks used, and the popsicle sticks should be the standard size (4.5" long, ⅛" thick).

21. The resource page also refers to aluminum. I assume this is Aluminum foil we use for wrapping food and not Aluminum Tapes to hold the popsicle sticks together. Can you please clarify. Also is there a limit to the amount of Aluminum foil we can use?

Yes, it is aluminum foil. There is no limit to the amount used.

22. There is a reference to tape as material. What kind of tape is allowed please? Is it duct tape or waterproof tape or packing tape or aluminum tape or does it matter as long as it is tape?

Any kind of tape is allowed.

23. There is a reference to glue as material. What kind of glue is allowed please? Is it gorilla glue or waterproof glue or school supplies glue or glue sticks, or hot gun glue or does it matter?

Any type of glue is allowed.

24. The build event resource judge criteria talks about points for materials used that are not on the list. Is there any criteria if we do NOT use all the materials stated in the guide? For example, can the kids decide NOT to use Aluminum? Will they lose points?

There will be no penalty if students do not use all of the materials listed.

25. The scoring says the kids will get 0 points if they use 3 or more materials that are not listed. It also talks about disqualification. What constitutes a disqualification versus 0 points?

0 points means for that specific category. Disqualification means 0 points for the Barge Building event as a whole. Cheating, by way of purposely sinking the boat at or near the predicted amount of pennies, constitute a disqualification.

26. Once we know the measurement we have to comply with (length / width / height), we want to know if we are allowed to use external tools to feed the pennies onto the barge? For example, can we build a coin feeder that dispenses one coin at a time to the barge? Then the kids will NOT touch the barge but the feeder will touch the barge. What are the limitations to how we can place the coins on the barge?

Judges will be the ones placing the coins on the barge, one coin at a time.

27. Before the barge is placed into the water, are we allowed to place pennies onto the barge? Or should the barge be empty before it is placed into the water?

The barge should start empty.

28. Who will place the barge into the water? Will it be done by the judge or by the kids? If kids, then they are touching the barge before the pennies are loaded. I assume that is allowed.

The judges will place the barge in the water.

29. Who will place the coins onto the barge? Based on the rules described, I assume the kids are placing the coins onto the barge (as there is a rule about deliberate sinking). If so, can they strategically place the coins such that they get full advantage of the buoyancy to keep the barge afloat?

Judges will be the ones placing the coins on the barge, one coin at a time.

30. What is the minimum time that the barge has to stay afloat after a new coin is placed on the barge? Is it 10 seconds or is it before the next coin is placed?

Coins will be placed at a constant rate, and will slow down once initial sinking is observed.

31. What if the team said 20 pennies and after they reach 17, they place 3 coins next leading the barge to sink? Will they be considered accurate?

The prediction is based on the number of coins the barge successfully holds without sinking (or the number coin that causes sinkage minus one). In this case, they would not be considered accurate.

32. Is there a rule that only one pennie can be placed on the barge at any given time? If not, how will you handle the above question?

Judges will be the ones placing the coins on the barge, one coin at a time.

33. In the challenge, there is no mention about the amount of time the barge will remain afloat. Is that going to be a measure? If two teams have similar barges and they both float 40 pennies but one of them stays afloat for 10 seconds before it sinks while the other can stay afloat for more than 60 seconds, which one will be considered the winner?

Coins will be placed at a constant rate, and will slow down once initial sinking is observed.

Can Race:

34. In the original presentation (slides) and in the Coaches zoom call, we talked about the can race. However, I haven't seen any reference to wheels? The picture on the slide shows wheels? Are wheels allowed?

They cannot use wheels for the can race.

35. The material list on the build event resource page talks about using "washers, tape, and popsicle/lollipop sticks" but does not provide clarity around rubber bands. How do we move the can without rubber bands? The washers, tape, and popsicle sticks will not be enough to create a tension for the can to move.

The cans will be placed at the top of a small ramp, which will allow the can to move as it rolls down. (No rubber bands cannot be used)

36. Are we allowed to use more than one can?

No, only one can is allowed.

37. Should the cans be of the same size or can it be different size and weight (if more than one can is allowed)

No, only one can is allowed.

38. The rule also says that we cannot push. So how will interia be generated for the object at rest to start moving? Without tension, it may be difficult to move unless you are expecting the washer to act as the way to generate inertia.

The cans will be placed at the top of a small ramp.

39. This rule says we can only use can, washer, tape, popsicle/lollipop sticks. Can we use glue or nails or screws or even balloons to move the can? Although the can will NOT have a balloon as a part of the material, can we use the balloon to blow the can forward? Or use static electricity to make the can travel? See this link. Is this allowed? This is neither pushing or touching the can yet making it move forward. Will the kids have access to travel along with the can? Is magnet allowed as an external force to pull the can forward similar to the balloon?

    Make a Can Move With Static Electricity - Can You? | Smart Science

The cans will be placed at the top of a small ramp, which will allow the can to move.

40. How do you determine the winner of the event? Will the race be done only once or is it best of n times? Or is it an elimination round format where the winner continues to compete until we find one team that can move the farthest? Sometimes the kids will have bad luck in the first attempt. The can may not move. How are we going to address that problem? Or do you consider the best of 3 rounds to be the score?

At this time, we cannot release specific scoring categories. In the event that a project does not perform as expected, students may petition for a retest and those decisions will be made on a case by case basis.

41. The points system says if the can moves 2 meters or more, 20 points are awarded. If there are two teams that go beyond 2 meters, who wins? And does it matter if the team got to the distance quicker (in case of a tie)?

Tie-breaking procedure will be announced the day of the event if necessary. Speed will not be a factor.

42. Similar to the barge judging, can I use materials not listed in the can race. If I do, will I be disqualified or will there be points deducted? For example, can I use a motor? If not, can I use water or other materials to make the can move through the use of disposition of weight to make it travel?

No, all materials used must have been listed. If you do, points may be deducted.

Popsicle Stick Bridge:

43. The build event resource page provided some guidance on the number of popsicle sticks that can be used. Is there a quality or size of the popsicle stick we can use? 50 Large popsicle sticks?

The popsicle sticks should be the standard size (4.5” long, ⅛” thick).

44. Can I break a popsicle stick into two and will that be counted as 1 popsicle stick or 2 since I broke it? Or am I not allowed to break a popsicle stick into multiple pieces?

Sticks may be broken up, and if broken up would be counted as a single total stick.

45. If I understand correctly, a broken stick into two will be considered two sticks or will it be one whole stick? From the above answer, it looks like two sticks. Please confirm.

A broken stick will be counted as one stick (two pieces of the same stick=one stick)

46. The resource page references 6kgs. Is that the minimum weight that the bridge should hold or the max? Is there a limit?

The bridge should hold at least 6 kgs. There is no limit as to how much the bridge holds.

47. Are we trying to find out which bridge can hold the maximum amount of weight? Is that the objective?

Yes, the objective is to create a bridge that holds the most amount of weight.

48. Your documentation said you will test the bridge at multiple structural points. Will you check the max weight first or the structural integrity of the bridge? We want to know which is important

The maximum weight, along with design and popsicle sticks used, will be used to determine placing. We check the structural integrity by placing the weights.

49. While checking the structural integrity, if the bridge collapses and breaks, then you may not have the opportunity to check the maximum weight it can hold. So how will you determine the maximum weight

(see above)

50. Will all the contestants be tested the same way as our team? Is the test going to be timed to find out which one breaks first?

All contestants will be contested the same way, and will be based on weight their bridge holds.

51. Can we know how a winner is determined? Is it the number of minutes the bridge is able to hold a certain weight or is it the number of pounds / kgs that the bridge can hold? Which is important? For ex: the bridge may be able to hold 4 kgs for 10 mins vs. 5 kgs for 30 seconds.

The objective is to create a bridge holding the maximum possible weight.

52. What does amount mean in the build event resource page? Are you referring to the amount of weight it can hold or the amount of time it held the weight or the amount of dollars spent to make the bridge? Can you please clarify

Amount of weight it can hold.

Instant Challenge:

53. Thank You for the reference material on the website for the instant challenge. What is the duration of the instant challenge?

The duration of the instant challenge will vary on the challenge itself, but should take no longer than 15-20 minutes, if that.

54. Are you judging on the outcome of the challenge or the participation of all the members for the given challenge

The score will be based on a combination of both the aforementioned sections.

55. Based on the examples, the instant challenge is a hands-on exercise focused on build activities. Will it also focus on theory or only build?

The instant challenge is based mainly on the creativity and teamwork of participants. There will be no multiple-choice or short-answer questions.

General Questions:

56. Thank You for sending the form to decide if we want to do it online or in-person. We may prefer an in-person event. Will parents be allowed to see the event? Will the event be live-streamed if they cannot view the event

The event rules will follow in accordance to COVID-19 guidelines at the time of the event. If we are able to do it in a safe manner, we will allow parents to watch the events in-person.

57. Will the final event be a whole day event? I assume yes.

The events will take the entire day, although there will be some down time for students in between.