

Survivor Science Team Quest

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Survivor* Science Team Quest

Our favorite gal is back again in *Max Einstein: Saves the Future.* Max is trying to solve the VERY important and VERY large problem of world hunger in the third book in the #1 *New York Times* bestselling Max Einstein series written by James Patterson and Chris Grabenstein. Max, along with the Change Makers Institute (CMI), begins to tackle this enormous issue. We learn of Max's past and how she lived on the streets and

had to survive with little food. This imaginative yet relatable third book in the series ignites students' desire to know more about how they can help address the issue of hunger in their own communities.

We know students love to compete and work in teams, which is why they will love this Team Quest** experience! Students will participate in challenges similar to those on the TV show *Survivor*. They will be "on the island" for five days and will have challenges to solve with their teams (teamwork!), just like the CMI solves problems together. Through interactive, engaging, and hands-on challenges, your students will investigate the issue of world hunger—a problem that is both local and global. At the end of each class, students will vote a group "off the island." The groups voted off will continue to compete in the challenges but cannot win in the end. They will, however, get a say in who stays and who goes. Your students will be having so much fun solving problems and competing with each other they will forget they are using science and language arts through it all! Let the Team Quest begin!

*Survivor Science Team Quest Inspired By:

CBS Interactive. *Survivor*. Survivor: Winners at War (Official Site) - Watch on CBS All Access. Accessed April 22, 2020. https://www.cbs.com/shows/survivor/.

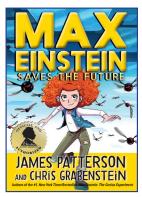
Tomm, Tracy. "Survivor Science." The Science Spot. Accessed August 24, 2020. https://sciencespot.net/Pages/survivorsci.html.

**Note about Remote Learning:

Although the Team Quest is designed for in-school classwork, it can also be completed when social distancing and remote learning are necessary. Teams can be split into breakout groups using a video conferencing tool. Teachers can pop in and visit teams in these breakout groups. Students will anxiously await the email containing the challenge of the day and a list of supplies needed. Teams can work together by sharing the documents through email or an online tool, such as Google Docs. The experience may feel different, but the fun will still be there!

Rationale for Teachers

Teamwork is essential as students move into high school, college, and careers. In this Team Quest, students will be given three different challenges to complete as a team. Each challenge must be completed before the time is up, mimicking deadlines that creep up in school and careers. Together, teams will use science, art, and language arts to try to win the title of Ultimate Survivor Science Team! Students will be using problem-solving and collaboration skills throughout this quest.



PROCEDURES/INSTRUCTIONS FOR TEACHERS

NOTE: All reproducibles can be found in the reproducibles packet at https://www.jimmypatterson.org/titles/james-patterson/max-einstein-saves-the-future/9780316488211/2

DAY 1: Setting Up for Surviving!

45 minutes

Today is about getting students excited about their Team Quest. Students will be participating in several Survivor Science activities over the course of five days. They will be working with their teams (groups of students) to solve problems that are related to *Max Einstein: Saves the Future*. On the first day, students will choose their teams, and team members will work together to create their suitcase, which will be used in the ceremonies. Max's suitcase traveled with her, and the teams will have their suitcases travel with them. Students will determine norms that will help them limit communication breakdowns and become strong and effective teams. To assist with this, students will refer back to *Max Einstein: Saves the Future* to find examples of how the Change Makers Institute managed breakdowns and worked together successfully.

I. Essential Questions

- How can groups communicate well when challenged?
- What makes a team successful?

II. Materials

- White construction paper
- Cardboard boxes to hold supplies (1 per group with a few extras for when teams are voted off)
- Markers or crayons
- Masking tape



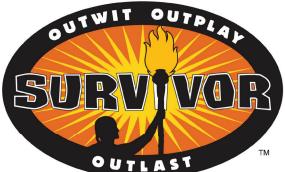
DAY 1: Setting Up for Surviving! (continued)

III. Procedure

Gather students and ask them if anyone has seen the television show *Survivor*. Allow that student (or students) time to explain the show to the class.

- **a.** Be sure students discuss the purpose of the show, examples of some challenges, and how to win.
- b. Show students this video to help them understand how *Survivor* works: https://www.youtube.com/watch?v=l1-hTpG_krk.

✓ Tell students they will be participating in Survivor Science—a quest that has them solving challenges in teams and possibly being voted off the island and/or earning the title Ultimate Survivor Science Team! There may also be an ice cream party or some other fun treat thrown in there for the winning team! (Right, teachers?)





✓ Have students discuss what makes a group successful.

a. To get some ideas, have students refer to chapter 42 in *Max Einstein: Saves the Future*. In this section of the book, the CMI team begins learning more about hunger issues in West Virginia. They share what is known about the hunger crisis. Students can share observations about the interactions of the team. What are some effective ways they interact? Ineffective ways?

For example, a positive interaction is when Tisa asks clarifying questions about the binder, and Hana listens patiently to all of Tisa's questions and answers them. A negative interaction occurs when Max shares an idea and instead of being open to her idea, Hana acts hurt and uninterested.

b. List students' responses on a board or poster paper that can be referred to later.

It is time for students to get into their teams!

Teams should consist of four to five students. Encourage students to choose their teams wisely by determining with whom they will work best.

Have students sit with their teams so you can record the names of the students in each team.

Next, have teams discuss how they can positively interact and communicate effectively while working on challenges.

✓ It is time for TEAMS to write their Team Laws.

The Team Laws are agreements or norms made by the teams that will help them successfully complete the challenges rather than fall victim to ineffective group behaviors.

✓ Hand a white piece of paper to each team.

On the white piece of paper, students will include the following:

- Team name
- Each student's name
- Three to five Team Laws—agreements or norms the teams create that will lead to positive communication and other success strategies, such as listening to each other, equal participation, and budgeting time wisely.

DAY 1: Setting Up for Surviving! (continued)

III. Procedure (continued)

Now that teams have written their Team Laws, it is time to create their suitcases using the cardboard box. The purpose of the suitcase is to hold the agreements the teams have made as a reference when working together and to show they are still competing to be the Ultimate Survivor Science Team. The suitcase will be removed when teams are voted off and replaced with a plain cardboard box.

✓ Lay out all of the materials for students to use.

Have teams tape the Team Laws onto the outside of their suitcases. Encourage students to make their suitcases colorful and unique to their team's beliefs and laws and to let their creativity shine! Voilà! Their suitcases are created.

IV. Wrap Up

Collect the suitcases from the teams. Display them in a place where they can be easily retrieved the next day.

Inform students they will begin their first challenge tomorrow, so get plenty of rest!



Standards CCSS.ELA-LITERACY.CCRA.SL.1

Prepare for and participate effectively in a range of

conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

DAY 2: Let the Challenges Begin!

60 minutes

It's a big day . . . the first day of challenges! Teams will learn their task and complete the challenge before class is over. In Max Einstein: Saves the Future, Hana encourages her teammates to consider what they eat and the impact their food choices have on the world (pg 76). For this challenge, students are going to learn about their environment (the "island") and learn how a seemingly small task, such as eating, can change an ecosystem. What a challenge!

I. Essential Questions

How can humans change ecosystems? How will you eat multiple meals a day without changing the ecosystem?

Challenge #1

You just arrived on the island. You and your team are starving! Knowing you will be here

for the next three days, you will have to figure out what to eat. However, you know the food

chain is already established here on the island. By eating certain foods, there could be a dis-

How will you eat multiple meals a day without changing

Using the materials provided, develop a menu for your team to use while staying on the island. On the bottom

of the menu, include one to two sentences describing how you did not change the ecosystem or how you made minimal changes to the ecosystem. Use the printouts

provided or a computer or tablet to go online and fir out more about the local food sources on the island!

Choose a scribe to fill out your Survivor Science work

sheet while completing your challenge.

e and find

ruption to that food chain.

Here is your challenge:

the ecosystem?

Directions:

Good luck!

II. Materials

- **Envelopes with CHALLENGE #1** (see CHALLENGE #1 scroll below)
- Suitcase full of supplies per team:
 - -White paper (1 per team)
 - -Pencil
 - -Colored pencils or markers
 - -Reproducible: Survivor Science Challenge (1 copy per team)
 - -Reproducible: Voting cards for CHALLENGE #1 (1 copy per team)

-Computers, tablets, laptops

OR

-Printouts for students to refer to with information or excerpts about "the island":

https://www.britannica.com/place/Pacific-Islands

http://www.foodbycountry.com/Germany-to-Japan/Islands-of-the-Pacific.html

https://www.khanacademy.org/science/biology/ecology/intro-to-ecosystems/a/what-is-an-ecosystem

-Timers

III. Procedure



✓ Before Class

- Make sure Challenge #1 scrolls are printed out and put in envelopes for teams. Suitcases should have the supplies, envelope, and Survivor Science Challenge reproducible.
- Copy the voting card for Challenge #1, but do not pass it out until the end of the challenge.

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Survivor Science—Challenge Shee

DAY 2: Let The Challenges Begin! (continued)

III. Procedure (continued)

V During Class

- When students are seated, welcome the teams back.
- The teams should be sitting together with their suitcases made the previous day.
- Each team will be given their suitcase full of supplies to use for the challenge. WAIT! Teams should NOT touch any supplies yet! They have to get some background information first.
- For this task, teams will need to understand the importance of ecosystems. Have the following article available for teams to gather information about ecosystems: https://www.khanacademy.org/science/biology/ecology/intro-to-ecosystems/a/what-is-an-ecosystem.

A. Give teams some time to skim the article and answer these three questions:

- 1. What is an ecosystem?
- 2. Why are ecosystems important to the world?
- 3. How can humans change ecosystems? What happens when an ecosystem is changed/altered too much?

B. Ask the teams to share their answers.

- In the suitcases, there are white envelopes that have today's challenge on them along with the supplies needed to complete the task. Teams cannot use any supplies other than what has been provided. Everything they need is in the box.
- While they complete today's task, teams need to record their thinking on the Survivor Science Challenge reproducible. One member should be designated as the scribe who will be recording the information on the reproducible while also working on the challenge. Teams will hand in the reproducible at the end of today's challenge.
- Allow teams a chance to ask questions before they read CHALLENGE #1 in their boxes.
- Today, students will complete CHALLENGE #1: How will you eat multiple meals a day without changing the ecosystem?
- Teachers, see the CHALLENGE #1 scroll below for the details of today's challenge.

Here are some possible sources of food the teams may discover on their island:

- Root vegetables, sweet potatoes, yams, bananas, mangoes, coconuts, papayas, pineapples, chickens, pigs, and seafood.
- Tell teams they have twenty-five to thirty minutes to complete the task. Start the timer . . . tell the teams to BEGIN!
- Alert the teams when there are fifteen minutes remaining, ten minutes remaining, five minutes remaining, and one minute remaining.

Challenge #1

You just arrived on the island. You and your team are starving! Knowing you will be here for the next three days, you will have to figure out what to eat. However, you know the food chain is already established here on the island. By eating certain foods, there could be a disruption to that food chain.

Here is your challenge:

How will you eat multiple meals a day without changing the ecosystem?

Directions:

Using the materials provided, develop a menu for your team to use while staying on the island. On the bottom of the menu, include one to two sentences describing how you did not change the ecosystem or how you made minimal changes to the ecosystem. Use the printouts provided or a computer or tablet to go online and find out more about the local food sources on the island! Good luck!

Choose a scribe to fill out your Survivor Science worksheet while completing your challenge.

DAY 2: Let The Challenges Begin! (continued)

IV. Wrap Up



Stop the activity with about fifteen minutes remaining in class.

Allow each team about two to three minutes to share the menu they created and to explain how their meals will not change or will make only a small change to the ecosystem. What choices did the teams make when choosing what to eat and why?

Remind students that Hana from *Max Einstein: Saves the Future* believes that the planet would be a better place if everyone were on a plant-based diet. Why does Hana believe this? Do the menus your team created align with her belief? Why or why not? How do you personally feel about a plant-based diet? What are the pros and cons? Explain.

After each team has shared, say to the teams, "Today, a team will be chosen to leave the competition. Their fate is in your hands. Choose wisely."

Provide each team with a copy of the Voting Card reproducible. Teams should gather and decide on one team to secretly "vote off the island" with a reason why.

• Some reasons may include the team forgot part of the challenge or the team's menu included too many changes to the ecosystem (i.e., too much of one specific food source was consumed).

Have students turn in all votes along with the completed Survivor Science Challenge reproducibles and menus.

Say, "The results . . ." (pause to keep the students on the edge of their seats) ". . . will be revealed tomorrow!" Congratulate the teams! They completed CHALLENGE #1.

V. Assessment

Completed reproducible: Survivor Science Challenge Sheet

Completed menus with explanation of changes to the ecosystem

Standards

<u>MS-LS2-1.</u>

Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

<u>MS-ESS3-3.</u>

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

ams Id" r the	Challenge #1 Your Team Name
r the	Your Team Name
r the	
1 1110	
ience	Which team are you voting off?
seats)	Why are you choosing that team?
Brainstorm Ideas	Mar Ebatelin Savas the Fature By James Paterson and Carls Grabendein By James Paterson and Carls Grabendein Survivor Science—Challenge Sheet Callenge is in your own words.) (How could your team solve this challenge?)
Results (What we	nt well? What didn't go well?)
Questions/Reflect challenge?)	ion (What questions do you have? What do you want to remember for tomorrow's
	Seats)

DAY 3: Banquet For All!

60 minutes

Hunger is a real issue facing the world today. In *Max Einstein: Saves the Future*, the CMI team is taken to a banquet for them to experience the inequalities surrounding food that exist in the world (pg 87). For the next challenge, teams will plan their own hunger banquet using the knowledge from the first challenge and what is available on the island. The purpose of the banquet is to help others understand world hunger issues in a memorable, hands-on way.

I. Essential Questions

- Why do hunger inequalities exist?
- How can you help teach others about world hunger issues through a hunger banquet?

II. Materials

- Envelopes with CHALLENGE #2 (see Challenge #2 scroll below)
- Rice (2 cups)
- Dry beans (1 cup)
- Plastic sandwich baggies (5 per team)
- Paper (1 piece per team)
- Pencil
- Crayons and/or markers
- Timers
- Computers, tablets, laptops OR

Printouts of information for students to refer to about hunger issues:

https://www.wonderopolis.org/wonder/why-is-world-hunger-still-a-problem

https://www.dosomething.org/us/facts/11-facts-about-world-hunger

https://www.thp.org/issues/hunger/

- Reproducible: Survivor Science Challenge (1 copy per team)
- Reproducible: Voting cards for Challenge #2 (1 per team)

III. Procedure

Before Class

- Make sure the CHALLENGE #2 scroll is printed out and put into each team's envelope. Double check that all of the materials are in the suitcases (or box for the team that has been voted off).
- Tally the votes from the previous day to see which team is voted off the island.

DAY 3: Banquet for All! (continued)

III. Procedure (continued)

✓ During Class

- Students should sit with their teams and have their suitcase with today's supplies.
- Welcome the teams back! Announce to the students, "A team has been chosen to leave the competition." Pause for dramatic effect. "That team is . . ." Announce the team and then dramatically remove that team's suitcase and replace it with a plain box containing supplies.
- Remind this team that although they cannot compete to become the Ultimate Survivor Science Team, they will continue to complete the challenges. The team must complete the challenge in order to earn their right to vote the other teams "off the island."
- Before sharing the next challenge, ask the teams to share what they learned from CHALLENGE #1: What is the relationship between hunger and ecosystems? What lessons have you learned about working effectively as a team?
- Remind students that Max and the CMI team are introduced to their next problem to solve—world hunger—through a hunger banquet (pg 87).
- Begin a discussion about why this banquet is so impactful to the CMI team. What do we know about hunger inequalities around the world? For example, in *Max Einstein: Saves the Future*, Ms. Kaplan shares this information:



"Seventy percent of the world's population is poor—do not have enough food—do not have access to clean water. Every day, they must make hard choices about who will eat and how much" (pg 89).

- According to dosomething.org, 805 million people worldwide do not have enough food to eat. Does this number surprise you? Why or why not?
- Today, students will complete CHALLENGE #2: How can you help teach others about world hunger issues through this banquet on the island?
- Teachers, see the CHALLENGE #2 scroll below for the details of today's challenge.
- In their suitcases (or box for teams that are voted off), students will find CHALLENGE #2 scrolls, rice, beans, baggies, paper, a pencil, and markers or crayons.
- Make sure each group has their suitcase with their supplies. Ready...set...BEGIN your challenge! Students have thirty to forty minutes to work.
- Alert the teams when there are fifteen minutes remaining, ten minutes remaining, five minutes remaining, and one minute remaining.

Challenge #2

Your team has determined how to keep the ecosystem relativity similar to when you arrived on the island. To help others understand more about hunger, your team will be hosting a hunger banquet just like in *Max Einstein: Saves the Future*.

Here is your challenge:

How can you help teach others about world hunger issues through this banquet?

Directions:

Using the materials provided, create your own hunger banquet to teach others about the hunger inequalities that exist in the world. Include two statistics or facts from the provided resources.

Choose a scribe to fill out your Survivor Science worksheet while completing your challenge.

DAY 3: Banquet for All! (continued)

IV. Wrap Up



Stop the activity with about fifteen minutes remaining in class.

Allow each team two to three minutes to share how they set up their hunger banquet and how their choices teach about hunger inequalities.

Encourage students to hold a hunger banquet at home. They can use the materials available in their homes to teach their families about hunger inequalities. Challenge them to be as creative as they can with limited supplies!



Say to the teams, "Today another team will be chosen to leave the competition. Their fate is in your hands. Choose wisely."



Teams should gather and decide on one team to secretly "vote

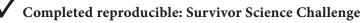
off the island" with a reason why.



All votes are turned into the teacher along with the Survivor Science Challenge reproducible.

Say, "The results . . ." (pause to keep the students on the edge of their seats) ". . . will be revealed tomorrow!" Congratulate the teams! They completed CHALLENGE #2.

V. Assessment



Students' hunger banquet presentations, including facts and statistics on inequalities

Standards

MS-ESS3-3 Earth and Human Activity

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

MS-LS2-1 Ecosystems: Interactions, Energy, and Dynamics

Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.



DAY 4: Helping Hunger Project Proposals

75 minutes

Wow, the teams have been facing challenges with creativity and communication! This final challenge will connect everything accomplished up to this point. Just like Max connects all of her experiences when solving problems, your students will connect their experiences for one final challenge—making the public aware of world hunger and simple ways to do their part.

I. Essential Questions

• What can we do to address hunger issues in our own school or community?

II. Materials

- Envelopes with CHALLENGE #3 (see CHALLENGE #3 scroll below)
- Reproducible: Helping Hunger Project Proposal (1 per team)
- Reproducible: Voting cards for the final challenge (1 per team)
- Pencils
- Poster paper (1 per team)
- Markers or crayons
- Sticky notes
- Computers for further research (optional)
- Timer

III. Procedure

	By James Patterson and Chris Grabenstein
GE #3 scroll below)	Project Proposal: Helping Hunger
per team)	moduction (Describe me issue surrounding nunger, be as specific as possible.)
(1 per team)	Motivation (What inspired you to come up with this particular idea?)
Challenge #3-Final Challenge Your Team Name	Project Summary (How can you make others more aware of hunger issues in your school/community?)
Which team should be the Ultimate	Project Details (What are you going to do? Be sure to include specific steps.)
Why are you choosing that team?	Challenges (What challenges do you expect to face? How will you deal with those challenges?)

- Before Class
 - Print out a CHALLENGE #3 scroll for each team and place it in a white envelope.
 - Put all of the materials in the suitcase (or box for teams that have been voted off) for each team—Helping Hunger Project Proposal reproducible (1 per team), pencils, poster paper, and markers or crayons.
 - Count the votes from the previous challenge to determine the next team voted off the island.

During Class

- Welcome the teams back to the island!
- Announce, "A team has been chosen to leave the competition." (Pause for dramatic effect.) "That team is . . ." Announce the team and dramatically remove their suitcase. Replace the suitcase with a plain box containing supplies. Remind this team that although they are not competing to be the next Ultimate Survivor Science Team, they will still participate in the challenge and must complete the challenge in order to vote others off the island.

DAY 4: Helping Hunger Project Proposals (continued)

III. Procedure (continued)

- Today is CHALLENGE #3. Remind the teams that this is their final challenge—the challenge that will encompass their learning from the other challenges.
 - In *Max Einstein: Saves the Future*, Max and the CMI team are in West Virginia at the food pantry (chapter 42). Max uses her knowledge about grocery stores and her experience of living on the street to come up with the idea of improving the food pantry.
 - Ask teams to summarize what they have learned up to this point from all of their team challenges. Give them two minutes to discuss as a group and then share (some examples might include, "Minimal change to ecosystems is ideal" or "Teaching others about hunger is more effective with hands-on, visual displays").
- CHALLENGE #3: What can we do to address hunger issues in our own school or community?
- Teachers, see the CHALLENGE #3 scroll below for the details of today's challenge.
- Inform the teams that instead of filling out a Survivor Science Challenge worksheet today, they will be completing a Helping Hunger Project Proposal worksheet and creating a poster.
- Make sure each group has their suitcase (or box if they have been voted off) with supplies. Ready . . . set . . . GO!
- Allow students about forty-five minutes to complete this challenge. Remind teams they need to transcribe the proposal to a poster, so they should build time in for that while they work.
- Alert the teams when there are ten minutes remaining, five minutes remaining, and one minute remaining.

Challenge #3

The teams have spoken. You have survived . . . so far. Take the next step and make a difference!

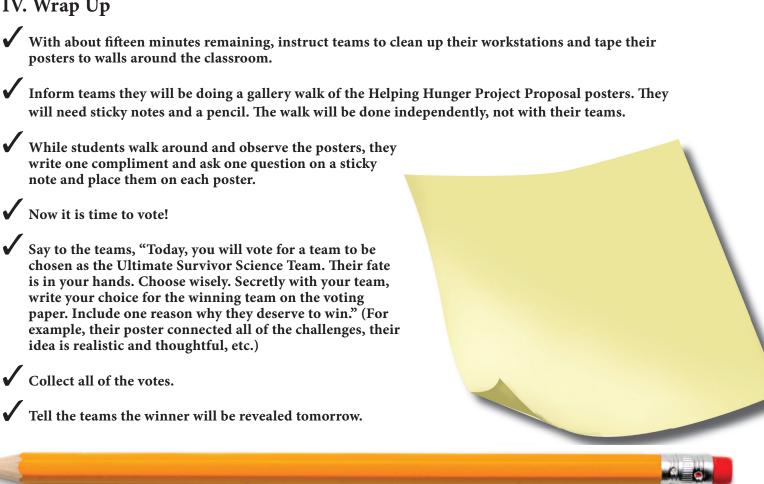
Here is your challenge: What can we do to address hunger issues in our own school or community?

Directions:

As a team, fill out the Project Proposal worksheet as a draft using what you have learned in previous challenges and any new research your team does on its own. Then, transfer the information to a piece of poster paper. This poster will be displayed for other groups to view. Be clear, add color, and have fun!

IV. Wrap Up

Now it is time to vote!



V. Assessment

Completed Helping Hunger Project Proposal worksheet

Completed Helping Hunger Project Proposal poster

Standards

MS-ESS3-3 Earth and Human Activity

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

CCSS.ELA-LITERACY.CCRA.R.7

Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

DAY 5: Teams Return Home

15 minutes

Students have worked extremely hard surviving on the island! Like Max and her CMI team, teams have created new ideas and collaborated with their peers to solve challenges and make a difference in their communities. It is now time for them to return home. However, they cannot do that without finding out who is the Ultimate Survivor Science Team!

I. Essential Questions

• Who is the Ultimate Survive Science Team?

II. Materials

- Posters from the previous day
- Ultimate Survivor Science Team certificate printed out

III. Procedure

Before Class

- Display all Helping Hunger Project Proposal posters.
- Count the votes from the previous day.
- Print off the Ultimate Survivor Science Team certificate for each member of the winning team and fill it out.

✓ During Class

- Welcome the teams to the last day on the island and celebrate the learning they have done while completing all of their challenges.
- Announce, "Teams, there has been a decision. Only one team can be named Ultimate Survivor Science Team. The winner is...." Announce the team and share their peers' reasons why this team was chosen.
- Hand each member of the winning team their certificate.
- Congratulate all students on their hard work and let them know the island is now closed.

DAY 5: Teams Return Home (continued)

V. Beyond the Island

- Hold on! Help students extend their learning beyond the island (and outside the classroom walls for some real-world learning)! Students have worked so hard creating these proposals. Here are some ideas for how they can make their proposals spring into action in their own school and/or local communities!
 - a. Students might meet for an after-school Helping Hunger Club and bring the winning team's proposal and/or the other proposals to life.
 - b. Students might present this proposal to the school principal and/or someone from the local food pantry.
- Other ways students can help:
 - https://thefoodoasis.com/student-activism-4-ways-your-child-can-help-feed-the-hungry-in-your-community/
- Your students want to do even more?

Check out these websites:

- https://foodandnutrition.org/september-october-2013/7-top-hunger-organizations/
- https://mswonlineprograms.org/poverty-hunger/
- https://www.feedingamerica.org/











Standards CCSS.ELA-LITERACY.CCRA.SL.2

Integrate and evaluate information presented in divisually, quantitatively, and orally.

verse media and formats, including

CCSS.ELA-LITERACY.CCRA.SL.4

Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.