

The logo is a large orange circle containing a white silhouette of a city skyline at the top and two stylized superhero figures at the bottom. The figures are purple with white outlines; the one on the left has a mask and wings, and the one on the right has a shield. An orange horizontal bar is superimposed over the center of the circle, containing the text "HEROIC INNOVATOR" in white, bold, sans-serif capital letters.

HEROIC INNOVATOR



Heroic Innovators Challenge

Sponsored By



The *WALT DISNEY* Company

Heroic Innovators Challenge



Learning Outcomes

- Understand Global Problems
- Research Potential Solutions to Global Problems
- Utilize Project Management
- Demonstrate Technical Design and Innovation
- Showcase effective storytelling
- Exhibit costume design skills

Points of Interest

- Research Global Problems and explore potential solutions.
- Create a story about a Heroic Innovator who discovers a Global Problem and creates an Innovative Device to solve or attempt to solve the Global Problem.
- Create and present the story in an Online Storytelling Submission video.
- If the team is invited to the live tournament in China, Present a live version of the story that the team submitted in the Online Storytelling Submission. The Live Presentation will include a Costume that Transforms.

Challenge Guidelines

TEAM BUDGET: The total value of the materials used in the Online Storytelling Submission may not exceed **\$75US**. If your team is chosen to participate in the Live Presentation, the total value of the materials used in the Live Presentation may not exceed **\$100US**.

TIME LIMIT: The Video submission **must not be longer than 4 minutes**. If the team is chosen to attend the live tournament, the Live Presentation (including setup) must be completed in **6 minutes or less**.

APPROACHING THIS CHALLENGE: This Challenge can be solved on many levels, ranging from the simple to the complex. Focus on solving this Challenge based on the intent in which it was designed. All Challenge requirements must be met unless otherwise stated using the terms “should” or “may.” Remember, if it doesn’t say you can’t, then you can.

SOLVING THE CHALLENGE: The information in Challenge is binding on all teams. Your team must read and follow this Challenge in its entirety.

Part I - Storytelling Submission Video



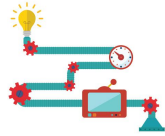
I. Research

- A. Research information about Global Problems (issues that impact the entire planet) from one of two categories:
 - 1. **Sustainable Cities and Communities.** For this Challenge, Sustainable Cities and Communities focuses on urban development to make cities inclusive, safe, resilient, and sustainable. Cities need to be clean and safe, with good housing, and basic services like water and electricity.
 - 2. **Responsible Consumption and Production.** For this Challenge, Responsible Consumption and Production focuses on ensuring sustainable consumption and production patterns. The impact on the planet must be considered when products are created, used, and thrown away.
- B. Choose one Global Problem from one of the two categories listed in I.A.1 to highlight in an original team-created story.



II. Story

- A. Create a story that includes one Heroic Innovator. For this Challenge, a Heroic Innovator is someone who recognizes the team-chosen Global Problem and attempts to solve the problem using an Innovative Device. (III.B) It is up to your team to decide if the Heroic Innovator solves the Global Problem in your story.
- B. Integrate information about the Global Problem into the team-created story.
- C. The story may be set in any location(s), real or imaginary.



III. Innovative Device

- A. Design and build an Innovative Device.
- B. An Innovative Device is a physical device that is a working prototype that helps solve the team-chosen Global Problem.
- C. To solve the Global Problem, the Innovative Device must potentially be able to make the problem go away or reduce the size and/or impact of the problem. Dramatic simulations, which only pretend to accomplish a task, do not meet this requirement.
- D. The Innovative Device may be based on an original idea or it may be inspired by something that already exists.
- E. The Innovative Device must use Technical Methods to initiate and/or operate the prototype of the team-defined solution to the Global Problem.
- F. A team member must not be the Innovative Device. Team member(s) can initiate, operate, and/or otherwise interact with the Innovative Device.
- G. For this Challenge, Technical Methods refers to the use of principles in fields such as:
 - Artificial intelligence
 - Chemistry
 - Computer science
 - Electricity
 - Hydraulics
 - Mathematics
 - Mechanical engineering
 - Physics
 - Software engineering
 - Structural engineering
 - Other technical fields are also acceptable
- H. Your team will earn points for Technical Design and Technical Innovation based on all Technical Methods used or attempted during the Presentation to initiate and/or operate the Innovative Device.



IV. Storytelling Submission Video

- A. Create a video that includes the story, the research about the Global Problem, and the Innovative Device.
- B. The video must be no longer than 4 minutes. Any content that appears after the 4-minute mark will not be reviewed.
- C. Your team is encouraged to use environmentally friendly and/or recyclable materials in your Presentation.

Part II - In-Person Presentation



I. Theatrical Presentation

- A. If your team is chosen to attend the China Tournament, you will be asked to present your solution in person.
- B. Create and present an in-person Presentation of the story about the Heroic Innovator that was presented in the team's Storytelling Submission Video. The team may choose any theatrical method or manner to present the story in-person.
- C. Integrate information about the Global Problem into your in-person Presentation of the story.
- D. Include the Heroic Innovator who solves or attempts to solve the Global Problem using an Innovative Device.
- E. Include the Innovative Device and how it could help solve the Global Problem.
- F. Your team is encouraged to use environmentally friendly and/or recyclable materials in your Presentation.



II. Costume

- A. Design and create a Costume that undergoes a Transformation during the Presentation.
- B. For this Challenge, a Costume is any article of clothing or other body covering worn by one or more team members to enhance the portrayal of one or more characters. Hairstyles and makeup may contribute to the portrayal but will not be considered part of the Costume.
- C. For this Challenge, a Transformation of the Costume is any visible, physical change in the appearance of the Costume.
- D. Integrate the Transformation into the story.
- E. The Transformation should be visible from 25ft (7.62m) away.
- F. The team may include more than one Costume or Transformation, but only one Costume and one Transformation will receive score.

AT THE LIVE PRESENTATION

Presentation Area: The minimum required size is 8ft x 10ft (2.44m x 3.05m). Your team may use any additional space that tournament officials designate as available, but your team should be prepared to present your solution in the minimum space. The Presentation Area will be a large space with a hard floor, such as wood, linoleum, concrete, or very short-napped carpet. Your team should be prepared to deal with a variety of floor surfaces. A single 3-prong electrical outlet will be provided at the edge of each Presentation Area for your team's use.

Forms: Your team will need to bring your completed Expense Report, Declaration of Independence, and Tournament Data Form to the tournament. (See the end of this Challenge for these forms.)

REWARD POINTS FOR STORYTELLING SUBMISSION VIDEO

ELEMENT	POINTS
A. Story	Up to 80
1. Creativity of the story A story is more creative when there is novel development of the storyline and characters.	Up to 20
2. Clear and effective storytelling This means the story has a beginning, middle, and end and is presented in a way that is easy to follow and understand.	Up to 15
3. Integration of research about the Global Problem into the story	Up to 25
4. Dramatic portrayal of the Heroic Innovator This means how well your team represents the ideas, personality traits, and the other characteristics that make the character unique.	Up to 20
B. Innovative Device	Up to 70
1. Technical Design of the Innovative Device Technical Design is the result of a plan for carrying out or accomplishing a task. A high-quality design shows careful planning and is effective, efficient, and reliable.	Up to 25
2. Technical Innovation of the Innovative Device Technical Innovation includes how new, unique, original, or creative the methods are for carrying out or accomplishing a task.	Up to 25
3. Integration of the Innovative Device into the story	Up to 20

REWARD POINTS FOR IN-PERSON PRESENTATION

ELEMENT	POINTS
A. Story	Up to 80
5. Creativity of the story A story is more creative when there is novel development of the storyline and characters.	Up to 20
6. Clear and effective storytelling This means the story has a beginning, middle, and end and is presented in a way that is easy to follow and understand.	Up to 15
7. Integration of research about the Global Problem into the story	Up to 25
8. Dramatic portrayal of the Heroic Innovator This means how well your team represents the ideas, personality traits, and the other characteristics that make the character unique.	Up to 20
B. Innovative Device	Up to 70
4. Technical Design of the Innovative Device Technical Design is the result of a plan for carrying out or accomplishing a task. A high-quality design shows careful planning and is effective, efficient, and reliable.	Up to 25
5. Technical Innovation of the Innovative Device Technical Innovation includes how new, unique, original, or creative the methods are for carrying out or accomplishing a task.	Up to 25
6. Integration of the Innovative Device into the story	Up to 20
C. Costume	Up to 50
1. Theatrical effect of the Transformation This includes how the Transformation of the Costume enhances the Presentation in a dramatic, interesting, and/or memorable way.	Up to 25
2. Creative use of materials in the design of the Costume	Up to 25



TOURNAMENT DATA FORM (1 OF 3)

Team Name: _____ Team Number: _____ - _____

School/Organization: _____ Level: ☐ ML ☐ SL ☐ UL

To our teams and Team Managers: Help your Appraisers identify the required elements of your Challenge solution so they can award you all of the points you have earned. Please fill out this 3-page form completely and neatly.

PART ONE: Required Paperwork

At the tournament Presentation Site, the Prep Area Appraiser will ask for your team's forms. A complete checklist of the required forms is below. None of the forms listed below can be used as a scoring item.

Your team needs:

- ☐ **6 copies** of the completed PAGE TWO of the Tournament Data Form. This is PAGE ONE of the form.
- ☐ **1 copy** of the completed PAGE THREE of the Tournament Data Form. This page helps your team reflect on how you experienced the creative process.
- ☐ **1 copy** of the completed Declaration of Independence. Blank copies of this form can be found at the end of this Challenge.
- ☐ **1 copy** of the completed Expense Report. This form can be found at the end of this Challenge. Be sure to bring copies of your receipts in case you are asked for them, but it is not necessary to attach them to the form.



STORYTELLING SUBMISSION VIDEO TOURNAMENT DATA FORM (2 OF 3)

(All teams will complete this form and submit with the Storytelling Submission Video)

Team Name: _____ Team Number: _____ - _____

School/Organization: _____ Level: ☐ ML ☐ SL ☐ UL

Brief Description of Scored Elements

This Challenge asks your team to supply the following information to help the Appraisers evaluate your solution.

1. **Which category does your Global Problem fit into?**

____ Sustainable Cities and Communities ____ Responsible Consumption and Production

2. **Describe your team's Global Problem and your research about the Global Problem:** Briefly describe your team's Global Problem, your team's research on the Global Problem, its causes, and any potential solutions.

3. **Heroic Innovator:** Briefly describe your team's Heroic Innovator.

4. **Innovative Device:** Briefly describe your team's Innovative Device, and how it will solve or attempt to solve the Global Problems. and the Technical Methods the Innovative Device uses to help solve or attempt to solve the Global Problem..

5. **Story:** Briefly explain your team's story and how your team has integrated research about the Global Problem into the story.



IN-PERSON TOURNAMENT DATA FORM (2 OF 3)

(Teams chosen to participate in the in-person Presentation will complete this form.)

Team Name: _____ Team Number: _____ - _____

School/Organization: _____ Level: ☐ ML ☐ SL ☐ UL

Brief Description of Scored Elements

This Challenge asks your team to supply the following information to help the Appraisers evaluate your solution.

1. **Which category does your Global Problem fit into?**

____ Sustainable Cities and Communities ____ Responsible Consumption and Production

2. **Describe your team's Global Problem and your research about the Global Problem:** Briefly describe your team's Global Problem, your team's research on the Global Problem, its causes, and any potential solutions.

3. **Heroic Innovator:** Briefly describe your team's Heroic Innovator.

4. **Innovative Device:** Briefly describe your team's Innovative Device, and how it will solve or attempt to solve the Global Problems. and the Technical Methods the Innovative Device uses to help solve or attempt to solve the Global Problem..

5. **Story:** Briefly explain your team's Story and how your team has integrated research about the Global Problem into the story.

6. **Costume and the Transformation:** Briefly describe your team's Costume Transformation.

TOURNAMENT DATA FORM (3 OF 3)

Team Name: _____ Team Number: _____ - _____

School/Organization: _____ Level: Level: ☐ ML ☐ SL ☐ UL

The Creative Process

Reflect on how your team experienced each stage of the creative process as you solved the Team Challenge.

1. **RECOGNIZE:** What process did your team go through in order to understand all of the issues or points of the Challenge?
2. **IMAGINE:** How did your team use your imagination to explore new ideas about possible solutions to the Challenge?
3. **COLLABORATE AND INITIATE:** How did your team work in a collaborative way? How did your team take risks and go beyond the minimum as you committed to a solution?
4. **ASSESS:** How did your team assess your solution as it was being created?
5. **EVALUATE AND CELEBRATE:** Reflect on your experiences. What did your team learn? How did your team celebrate your journey and accomplishments?



DECLARATION OF INDEPENDENCE

Team Name: _____ Team Number: _____ - _____

School/Organization: _____ Level: ☐ ML ☐ SL ☐ UL

Please print and sign names of all team members participating in today's Presentation. Team members who contributed to the solution but who are unable to attend today's Presentation should also be listed. (Their signatures are not necessary.) Please note the reason for their absence on the signature line.

1. Name: _____ Grade/Birthday: _____

Signature: _____

2. Name: _____ Grade/Birthday: _____

Signature: _____

3. Name: _____ Grade/Birthday: _____

Signature: _____

4. Name: _____ Grade/Birthday: _____

Signature: _____

5. Name: _____ Grade/Birthday: _____

Signature: _____

6. Name: _____ Grade/Birthday: _____

Signature: _____

7. Name: _____ Grade/Birthday: _____

Signature: _____

Please circle True or False for each statement below. If you answered False to any statement, please explain in the space provided below. A deduction may need to be assessed in order to be fair to teams that did not receive help.

TRUE FALSE	We understand the rules of Interference.
TRUE FALSE	The research, ideas, and solutions for our Presentation are those of ONLY the team members signed or listed above.
TRUE FALSE	All team members who worked on our Challenge solution are listed above.

To the best of my/our knowledge, the above statements are true. In addition, I/we certify that all elements of this team's solution, including chemicals, will be handled and used safely and not cause harm to individuals or the facility.

Team Manager Name (printed)

(signature)

Date

Team Manager Name (printed)

(signature)

Date



Team Name: _____ Team Number: _____ - _____

School/Organization: _____ Level: ☐ ML ☐ SL ☐ UL

Every item used in your team's Presentation must be listed here. You should write the word "Exempt" on the amount line if it is an exempt item. Exempt items include audio/visual equipment, computers and related equipment, electrical equipment (extension cords, converters, etc.) musical instruments, and classroom furniture. You must account for all things that are used in your Online Story Submission or Live Presentation.

Clothing Items	Amount
Prop Items	Amount
Trash Supplies Used	

[illegible]

Total Value	
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CHALLENGE APPENDIX

PROJECT MANAGEMENT TOOL

The world runs on projects, and your team will be managing a large project (the Heroic Innovator Challenge) with many tasks that your team will need to complete to create a solution to the Challenge.

Project Management Steps

Every project proceeds through a cycle comprising five steps: Initiating, Planning, Executing, Monitoring and Controlling, and Closing. While solving a Challenge, DI teams experience the same process that professionals use as they address large-scale, real-world problems. The project management cycle closely aligns with the creative process teams follow when solving the different components of a Team Challenge.

Initiating: The first step of every project cycle is to define the project. This step is related to the Recognize Stage of the creative process. Your DI team's Challenge project can be broken down into a smaller number of mini-projects (deliverables). Each Team Challenge has a number of requirements that need to be met for the team to solve the Challenge. During this step, your team will work to determine team guidelines and expected behaviors, choose a Challenge, understand all elements of the Challenge, set goals for the overall project, determine meeting schedules, begin to learn to work together, and start to explore the roles and behaviors that are necessary for team success. The team should discuss and agree upon these important factors before any work begins on the solution.

With DI Team Challenges, many of these essential project requirements are defined in the Challenge to help teams know where to start. During this step, it will also be important for the team to define roles for each team member. By defining team roles, each individual team member can more easily understand the task at hand and how to contribute effectively and efficiently to the Challenge solution.

Planning: During the Planning step, team members will use their imaginations (the Imagine Stage of the creative process) to identify the mini-projects and tasks (deliverables) that need to be completed to solve the Challenge. Once the team members have a good understanding of the Challenge, they will be able to see how many tasks and mini-projects they need to undertake to successfully complete the Challenge.

Executing: In the Executing step, teams will use the Initiate and Collaborate Stage of the creative process. Most of a team's time will be spent in this step of project management. Team members will use the team-generated requirements from the Planning step and bring those ideas to life. Though it may seem exciting to jump ahead and "just do something," executing a project works best if the appropriate amount of time has been allocated first to defining and planning. Careful planning, research, and testing will make the Executing step easier. Since the DI Challenge Experience requires teamwork and collaboration, the Executing step will be more effective if roles are defined and the work and project can be split up between team members who have specific skills, expertise, or interest in certain areas of the Challenge.

Monitor and Controlling: In this step, teams will use the Assess stage of the creative process. Team members will use the plans they developed in the Planning step to track their progress on each task or mini-project and ensure that their completed mini-project and tasks meet the team defined requirements. Have the team members refer

back to the Scoring section of the Challenge to ensure that the tasks and mini-projects they are creating also meet the Challenge requirements. Team members may find that their plans for a task or mini-project are not working and they will cycle back through the other steps in the creative process to create a new plan that does meet the Challenge requirements.

Closing: The last step in every project is Closing, where the team will focus on the quality of the project deliverables and complete the evaluation and celebration stages of the creative process.

PROJECT MANAGEMENT TOOL (Questions to Ask)

Project Management Step	Destination Imagination Creative Process	Questions to Ask/Things to Do
Initiating	Recognize	<p>Understand the requirements of the Challenge:</p> <ul style="list-style-type: none"> • What do you need to have completed at the end of the Challenge? • List the different elements of the Challenge. • Which elements of the Challenge will earn points? • Which elements of the Challenge will not earn points? • How much money can you spend on your solution? • How much time do you have to complete your Presentation at the tournament? • How much time do you have to create your solution?
Planning	Imagine	<p>Create a plan to complete the Challenge. Here are some questions to get you started with your plan:</p> <ul style="list-style-type: none"> • How will you decide on the Global Problem? • What did you learn about the Global Problem and potential solution? • How will your research help you create your Innovative Device? • What research will you integrate into your Presentation? • How will you meet the requirements of the Challenge? • Outline your story about the Heroic Innovator. • What characters will you have? • Where will the story take place? • How does the Global Problem affect the character(s) in your story? • What will you create for your Costume? How will it transform? • How can you divide the work so it gets done on time? Who is going to work on each element of the solution?
Executing	Collaborate & Initiate	<p>Follow your plan and complete your solution:</p> <ul style="list-style-type: none"> • Are your ideas, Innovative Device, and Costume working as you planned? • Does everyone have a task? Is everyone working together?
Controlling and Monitoring	Assess	<p>Assess your progress:</p> <ul style="list-style-type: none"> • Does your solution meet all of the requirements of the Challenge? • Check your progress against your plan. • Check your solution against the Scoring requirements.
Closing	Evaluating & Celebrating	<p>Discuss your team's process and solution after completing the Challenge:</p> <ul style="list-style-type: none"> • Did you follow your plan? • What would you do differently next time? • What could you improve? • How did your team work together?

STEP	QUESTIONS TO ASK/THINGS TO DO
Initiating	Understand the requirements of the Challenge:
Planning	Create a plan to complete the Challenge:
Executing	Follow your plan and complete your solution:
Monitoring and Controlling	Assess your progress:
Closing	Discuss your team process and solution after completing the Challenge:

STORY DEVELOPMENT TOOL

The team members will create an outline for their story about a Heroic Innovator. This outline will be the team members' guide as they create their solution and develop their story and the other Challenge requirements. Once the team members agree on the list, they can move on to planning the project.

Story Element	Description	Team Agreement?
Research about the Global Problem and potential solutions		
Story beginning		
Heroic Innovator		
Story middle		

Story Element	Description	Team Agreement?
Innovative Device and how it solves or attempts to solve the Global Problems		
Costume and its Transformation		
Story End		
Notes		



The Team Manager/Coordinator of a team with an active, registered Team Number is given permission to make 10 copies of this document for their team's use only, provided these copies are supplied to participants solely for their use in Destination Imagination.

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