INSTRUCTIONS

In Part 1 of the Project Plan, you will outline your overall goals, resources, constraints, and assumptions to help you envision your final project.

Goals explain what will be achieved by the end of Future City. Setting goals will help you to determine what you want the outcome of the project to look like. Goals help you answer the question, “How do I know when I’m done?”

Once you have a general vision of your project, make sure your project goals are realistic and attainable. This can be done by identifying available resources, constraints, and assumptions.

Think About It

Goals can be wide ranging:
• How do you want to work as a team?
• What would you like to achieve with each deliverable?
• How could you apply the engineering design process to your project?
• What other goals are important to your team?
FUTURE CITY TEAM NAME: Baradwyston

ORGANIZATION:

EDUCATOR:

TEAM GOALS

The first goal is listed for you. Feel free to list more than four goals!

1. Our team will successfully create a futuristic waste management system for our future city.

2. Our team will work together to fluently present all aspects and innovations in a creative and agreed upon way.

3. Our team will strive to build a future city that is as close to 0% pollution as possible.

4. Our team will work to problem solve and compromise in a way in which everyone’s ideas are valued and no one person is in charge of the entire process.

Brainstorm possible resources, constraints, and assumptions for your project.

| Resources | Arts and crafts supplies  
|           | Maybe the 3-D printer  
|           | Time – during study halls, lunch, and after school  
|           | Expertise from our engineer mentor  
|           | Recyclable products for model construction  
|           | Computer access  
|           | Expertise from other teachers or experts in engineering fields |

THINK ABOUT IT

- What resources are available through your school, home, and community?
- What skills do team members and your mentor have?
- Who can you call on for support?

| Constraints | Homework  
|             | Time  
|             | Staying within the rules of the competition  
|             | Agreeing on solutions  
|             | We have a large group and not everyone devoted the same amount of time  
|             | Project that is needed  
|             | Not spending over the allotted amount of money |

THINK ABOUT IT

- What might get in the way of you completing your project:
  - Busy schedules?
  - Size of group?
  - Other things?
- How could your team work around any constraints?

| Assumptions |
|            |

THINK ABOUT IT

- How much time might you need for planning?
- Will materials be easy or difficult to find?
- In what ways will your team work well together?
- Which parts of the project seem most challenging?
| List the things you believe to be true about your Future City project. | It will be challenging to find really innovative solutions since we are not very familiar with solid waste disposal. The moving part may be difficult to incorporate into the model. Our team is composed of students who have lots of creative ideas – compromise might be a challenge. We may need help getting the supplies needed to complete the project. Since we have limited time, any time together must be used to the fullest extent. We may need to divide up our talents to work on different aspects of the competition requirements. |
INSTRUCTIONS

In Part 2 of your Project Plan, you will make a schedule to help you complete each deliverable.

To create your schedule, you will identify what needs to be done and in what order. Follow the process outlined here or use your own.

Step 1: Establish Milestones & Tasks

Begin by brainstorming the milestones and tasks for each deliverable. Write the milestones and tasks for each deliverable on index cards or sticky notes. This will allow you to move them around later. (Use the template below as a guide or create your own.)

- **Milestones** are important points in the project’s timeline that help you determine whether your project is on schedule. Milestones are written as statements of what will have been accomplished.
- **Tasks** are the “to do” items you need to complete to accomplish each milestone.

**Think About It**

What tasks support each milestone?

*For example, a milestone for the City Model is to complete the moving part. Tasks for building the moving part could be to research ideas, collect materials, and design and build the moving part.*

**Schedule Card Template**

**Deliverable:**

**Milestone/Task:**

**Estimated Time to Complete:**

**Team Member(s):**

Visit the PLAN stage of Leading Your Team (futurecity.org) to learn more about scheduling.

**Tip: Color Code Deliverables**

Choose a different color sticky note or index card to represent each deliverable. That way you can see the tasks for each deliverable and how the deliverables work together.
Step 2: Determine Sequence

Now it’s time to think about the order in which things should be done. Arrange the cards for each deliverable in a logical order.

- An **Independent Task** can be completed at any time and is not related to some other thing being done.
- A **Dependent Task** must be completed before the next one can begin.

**Think About It**

Does one task need to be completed before another one can begin?

*For example, before you can build the City Model, you first need to determine the scale.*

Step 3: Estimate Time

Think about how much time tasks will take and record the time on the cards. Keep in mind there are two types of time:

- **Work Time**: How long it will take a person to do the work.
- **Elapsed Time**: How long it takes for a task to be completed.

**Think About It**

How much work time and elapsed time would it take to glue trees to your city model?

*For example, it may take 30 minutes of work time for you to glue trees to your City Model, but it takes 24 hours (elapsed time) for the glue to dry.*

Step 4: Assign Roles

Next decide who will get the work done. Assign team members to be responsible for each task and record their names on the cards.

**Think About It**

- What are the interests and skills of each team member?
- How will you divide the work?
- Is work distributed fairly among team members?

Step 5: Make a Schedule

Now it’s time to transfer your cards to an actual schedule and assign dates. One way is to attach your cards to a timeline or large wall calendar.

*Keep in mind* that things will change along the way—be sure to review and revise your schedule as needed.
Show Us Your Style!

An image of your schedule is part of your Project Plan deliverable. What does your schedule look like?

Did you:
- make a large wall calendar;
- use a shared online calendar; or
- schedule your project mostly through text messages?

Show the process you used by inserting a photo, screen shot, or drawing in the Team Schedule sheet on the next page.
FUTURE CITY TEAM NAME: Baradwysdon

ORGANIZATION:

EDUCATOR:

TEAM SCHEDULE

This is one of the schedules we set up about group future city meeting times and locations.

Many of our meetings were scheduled through notes and dates posted at school.

Posted on the classroom door. We also communicated via text!
In addition, we used Google Docs as a way to communicate and plan our Future City project.

Everyone was able to comment and team members chose different colored fonts in Google Docs so that we could see who was sharing what information.
INSTRUCTIONS

In Part 3 of your Project Plan, you will conduct check-in sessions to help you monitor your project’s progress and ensure that you meet your goals.

Regular check-ins are a great way to communicate with your team. These meetings can be simple and quick—just be sure to do them often!

Make copies of the Check-In Report template and use them to update all project stakeholders (team members, educator, mentor) on the status of your Future City project.

Tip: Before Each Check-In:
- Review your schedule and the requirements for each deliverable.

After Each Check-In:
- Make changes to your schedule as needed.

Show Us Your Style!

One Check-in Report is part of your Project Plan deliverable
Submit one report that illustrates an important point in your project, such as when you solved a problem, made a critical revision, or reached a major milestone.

Visit the DO stage of Leading Your Team (futurecity.org) to learn more about check-ins.
## Team Check-In Report

**Date:** 12/11/15

### Team Members:

<table>
<thead>
<tr>
<th>What have you completed recently?</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.B. – Recently completed the Sim City portion of the competition including the slide show presentation.</td>
</tr>
<tr>
<td>A.T. – I completed researching and writing with my group, the waste management portion of the city description.</td>
</tr>
<tr>
<td>K.S. – I worked on getting my grandfather, our team mentor, up to date on our status and setting up times for him to come in to school and work with the team. I am also working on getting materials for the model.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What are you working on now?</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.B. – Beginning planning for the model and the presentation. Continuing research to prepare for the presentation portion of the competition.</td>
</tr>
<tr>
<td>A.T. – Preparing notes to start writing the presentation and designing visual aids for the presentation.</td>
</tr>
<tr>
<td>K.S. – I am now focusing on the presentation and model and working on the moving part. I will also be helping some of the other team members with the visual aid and brochure we are creating.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>When do you think the current task will be done?</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.B. – Hope to have the model completed by January 11 and the presentation by 12/18.</td>
</tr>
<tr>
<td>A.T. – I set a deadline of 12/18 for the presentation (this is what the team agreed to) and I hope to have the visual aids completed by 1/8/16.</td>
</tr>
<tr>
<td>K.S. – My current tasks will take me up to competition week. I am trying to get the presentation in good shape so I have time on winter break to practice and work on questions with my grandfather.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What do you need to keep your work on track with good quality?</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.B. – I need to keep reading over the city description and researching any material that is unclear. I need my teammates to continue to complete their portion so that we can finish on time.</td>
</tr>
<tr>
<td>A.T. – I need to budget out my time because I have many outside of school activities going on right now, so I need to complete a small portion each day.</td>
</tr>
<tr>
<td>K.S. – I need to use the schedule we set up and make sure I stick to it. I need to show up for the model building so that nothing falls behind.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.B – Need to start writing the presentation so it can be edited by the teacher.</td>
</tr>
<tr>
<td>A.T. – Need to decide how we would like our presentation to sound and get started so we have over winter break to work on memorization.</td>
</tr>
<tr>
<td>K.S. – I will spend time with my grandfather because I can really help the team by working with him since I have access to him all the time.</td>
</tr>
</tbody>
</table>
INSTRUCTIONS

In Part 4 of your Project Plan, you will reflect on lessons learned to help make your next projects easier.

Now that your hours of hard work have paid off, it’s time review what you did and how you did it.

Working as a team, record your responses to the questions on the next page.

Tip: Prepare for the Competition

Judges ask questions just like these. Reviewing your project and answering these questions are a great way to prepare for your presentation!

Visit the REVIEW stage of Leading Your Team (futurecity.org) to learn more about reflection.
FUTURE CITY TEAM NAME: Baradwysdon

ORGANIZATION:

EDUCATOR:

TEAM REFLECTION

1. Look back at your original project goals from the Define stage. Did your team fully meet your stated goals for the project? Were there some goals that were met more completely than others?

One of the biggest goals we worked on as a team was time management and compromise. Every team member had great ideas and sometimes it was difficult to get down to the one idea we were going to use. While not everyone was always happy we had to learn to compromise. We feel that we did design a great solid waste management system that incorporated innovative ideas that could be used in cities in the future. Our ideas was something we would use in our own homes. Time management was a challenge. The time seemed to pass faster than we expected and we always felt there was so much do complete, especially since we are all very busy outside of school.

2. Look back at your original ideas for your city. Did any of the ideas change as you went through the process of creating your final city? Describe one way your city changed and why.

Our solid waste management system changed as we went through the process. At first we were going to have just a neighborhood station where everyone brought their trash – in a round-a-bout type setting, but the more we researched and planned, we realized that that would not work as people would want to dispose of everyday trash and might not want to have to go outside to throw their trash away all the time, so we developed the in home trash option as a viable alternative. We were able to design the infrastructure for this and still keep some of our neighborhood ideas as a secondary option for additional or larger trash.

3. Consider your schedule and process. What were some of the major challenges to meeting your deadlines, and how did you overcome those challenges?

Some of our major challenges was time. All of the team members are very busy not only in school, but with outside of school activities and we found it challenging to get together. We tried to create a schedule that offered a wide variety of days and times to meet so that if someone has to miss one day, they might have the opportunity to come to a different meeting that was scheduled. In addition, we all had lots of ideas and sometimes it was challenging deciding which idea to use throughout the process. We usually discussed the ideas and then voted on which idea we were going to use.

4. Consider your team. How well did your Future City team work together? What do you know now about being part of a team that you didn’t know before?

Our Future City team worked very well together. We all tried to divide up the work so that everyone had a part in the whole process. There were times when one or two people did not complete what they said they were going to do, but when that happened, someone else on the team jumped in a picked up the slack. We learned that city planning takes a lot of work and that many things need to be considered when making decisions. One decision that seems right, may not be the best for everyone and sometimes it takes lots of compromise to make something work efficiently and effectively.
5. **What was the most helpful piece of advice** you received from your mentor or teacher as you worked on your Future City project?

Our teacher said that we needed to work together and take all of our ideas, then discuss them and decide as a team which ideas we would use in the different portions of the program. Compromise was a big word for our team!

6. **What was the most valuable experience** you gained from the Future City Competition?

Learning how to compromise and show that we valued everyone’s ideas in a good way was a valuable experience for our team. We also learned a lot about scale and problem-solving. The moving part was a challenge for us, but through compromise and problem-solving, and teamwork – we loved our end result!