UTAH HERITAGE FOUNDATION PRESENTS

THE YESTERDAY'S TOMORROWS

TEACHER'S GUIDE

Utah Heritage Foundation sincerely thanks the generous sponsors who made the development and production of *The Yesterday's Tomorrows Teacher's Guide* possible:

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FOUNDATION

Smithsonian Institution Traveling Exhibition Service

Special thanks to Envision Utah for providing copies of the Envision Utah Chip Game to schools in Brigham City, Payson, and Hyrum, Utah.

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The Yesterday's Tomorrows Teacher's Guide
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August 1939. Reproduction by permission of agent Forrest J Ackerman, Hollywood.
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Avery Architectural and Fine Arts Library, Columbia University in the City of New York.

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UTAH HERITAGE FOUNDATION

This publication was produced by Utah Heritage Foundation. Established in 1966, Utah Heritage Foundation was the first statewide historic preservation organization in the western United States. The foundation's mission is to preserve, protect, and promote Utah's historic built environment through public education, advocacy, and active preservation.

Utah Heritage Foundation fulfills its mission through a wide range of programs and activities which reach communities throughout the state, including: the annual Historic Homes Tour, tours and classroom programs for school groups, the Heritage Awards program, our news magazine, *Heritage,* the low-interest Revolving Fund Loan Program, and stewardship of the historic Memorial House in Memory Grove Park. As a private, non-profit, membership-based organization, the foundation is mainly supported by private resources, including memberships, gifts, grants, and proceeds from special events.

For more information about The *Yesterday's Tomorrows Teacher's Guide* or Utah Heritage Foundation, please contact us at:

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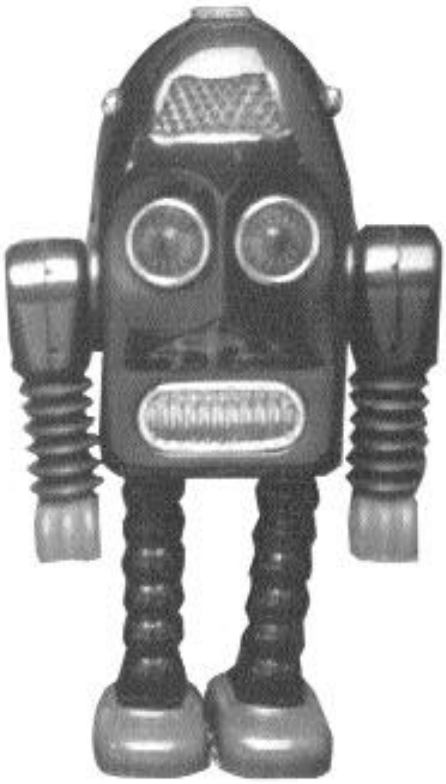

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Lessons

Introduction

Yesterday's Tomorrows Teacher's Guide

It's the 21st century already! Where are our personal jetpacks and household robots? Shouldn't there be a colony on Mars, or at least on the moon? When do we meet the aliens?

Yesterday's Tomorrows: Past Visions of the American Future is a Smithsonian Institution traveling exhibition that explores the history of the future. Through images of ray guns, robots, nuclear-powered cars, and the Atom Bomb House, *Yesterday's Tomorrows* examines how visions of things to come reveal the values and beliefs of the people who created them.

You and your students will have the opportunity to visit *Yesterday's Tomorrows* as the exhibition tours your state. The *Yesterday's Tomorrows Teacher's Guide* is designed to help you relate the themes of the exhibition to the past and future of your community. Through the lessons in the guide, students imagine and plan a future city, identify and explore the aspects of their heritage they wish to pass on to the future, and analyze how the design of the built environment will shape their future lives.

This guide includes six classroom lessons as well as a scavenger hunt for students to use during their tour of *Yesterday's Tomorrows.* The lessons can be taught either before or after your visit to the exhibition. In several of the lessons, students create products that can be displayed with the local component of the exhibition. Contact your local *Yesterday's Tomorrows* coordinating committee or state Humanities Council for more information on displaying your students' work.

The lessons are designed to be adaptable for grade levels 4 - 12. Please rely on your knowledge of your students' capabilities to decide whether students need additional explanation of the ideas in the lessons. The lessons integrate concepts from several subject areas and emphasize problem solving, critical thinking, and citizenship skills.

The Lesson Format

The *Yesterday's Tomorrows Teacher's Guide* lesson plans utilize readily available materials and require little preparation to teach. Each lesson is organized in the following format:

Grade Levels: Lists the grade levels for which the lesson can be adapted.

Subject Area: Lists subject areas in which students will learn concepts and/or develop skills in the lesson.

Objectives: Highlights the concepts and skills to be taught in the lesson.

Materials: Lists all the materials needed for the lesson. All activity sheets, graphics, and teacher background information listed for a particular lesson follow the lesson in the guide.

Setting the Stage: Some lessons include step-by-step instructions for a brief activity that relates the lesson topic to subjects already familiar to students and/or assesses students' prior knowledge of the topic.

Student Instruction: Step-by-step instructions for introducing students to concepts and skills listed in the objectives.

Student Activity: Step-by-step instructions for an activity that allows students to apply their new knowledge or skill to meet the lesson objective.

Extensions: Some lessons include additional activities that address the objectives.

Evaluation Form

Utah Heritage Foundation is committed to providing high quality heritage education programs for students and teachers. Your input is vital to helping us improve our programs. After you have completed your teaching from the *Yesterday's Tomorrows Teacher's Guide,* please make a copy of the evaluation at the end of the guide and spend a few moments answering the questions. Send your completed form to: Utah Heritage Foundation, P.O. Box 28, Salt Lake City UT 84110-0028.

We hope you and your students will find exploring Yesterday's Tomorrows a rich and exciting educational experience. For more information about *Yesterday's Tomorrows,* a schedule of the exhibition's tour in your state, and fun future-related resources and activities, visit the official *Yesterday's Tomorrows* website at http://www.yesterdaystomorrows.org.

Yesterday's Tomorrows Scavenger Hunt

Look for the answers to these questions as you explore the Yesterday's Tomorrows exhibit. Each group of questions goes with a different section of the exhibit. Write down your answers and return the sheet to your teacher.

Robots

1. Describe one way people in the past imagined robots would be used.

2. Describe three different ways robots are actually used today.

3. If you could build a robot, what would it do? Draw a picture of it in the box.

Imagining the Future

Find an image of the future that reminds you of the following words. Write the name of the image next to the word.

funny _____

frightening _____

old _____

exciting _____

realistic _____

Homes of Tomorrow

Find a house that matches each of the descriptions below. Write the name of the house next to the description.

a crystal house _____

a house like a machine_____

a house like a Ford _____

a very crowded house _____

a washable house _____

Which house looks most like the "Home of Tomorrow" to you? Why?

Transportation of Tomorrow

1. Why don't we all use F-2 Airphibians today?

2. What would you do with a Small Rocket Lift Device?

3. Would you fill up your Ford Nucleon at the gas station? Why?

4. What are the advantages of an Intelligent Vehicle Highway System?

5. Do you need to worry about flat tires if you drive a Moller M400?

Communities of Tomorrow

Choose a word to describe the communities below. Write the word next to the name of the city.

Democracity_____

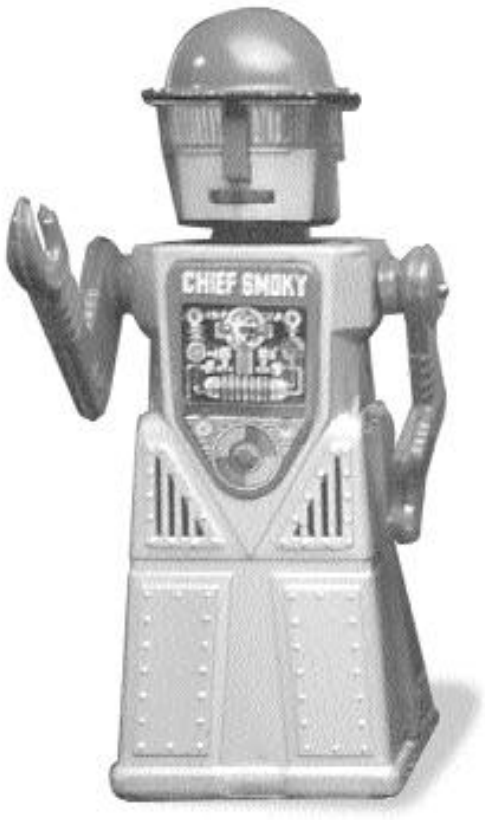
Megastructure _____

Visionary City _____

Arcosanti _____

The Mile High _____

Which “Community of Tomorrow” would you like to live in? Why?

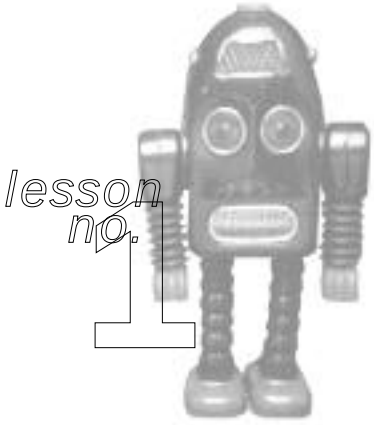


Imagining the Future of Our City

Grade Levels: 4-12 • **Subject Areas:** Social Studies, Language Arts, Science

Objectives

Students will:
- Analyze the difficulties of making accurate predictions about the future.
- Predict the future of your city based on research.
- Present their predictions to the class and community.
- Evaluate their predictions and those of other students.



Materials

Past Predictions Sheet (1 overhead)
Internet Resource List (1 copy per each team of three students)

Setting the Stage

OPTION 1 *— For classes that have visited the* Yesterday's Tomorrows *exhibition.*

1. Ask students to recall some of their favorite predictions about the future from the exhibit.

2. As a class, discuss the difficulties of predicting the future (i.e., impact of unforeseen technologies, social trends, etc.). Ask students to think of examples from the exhibit of predictions that did not come true and explain what developments/factors the prediction did not take into account.

3. Explain: *Now that we've seen how some people in the past imagined the future, it's our turn to make some predictions. Our job is to imagine life in our city 100 years in the future.* Ask students: *How can we make the most accurate predictions possible? What background information do we need?* List student ideas on board. For younger students, explain the strategy of examining current trends to make predictions about the future.

OPTION 2 *— For classes that have* ***not*** *visited the* Yesterday's Tomorrows *exhibition.*

1. Explain: *Everybody likes to imagine the future, but even experts have a hard time predicting what the future will really bring.* Share some of the misguided predictions from the *Past Predictions Sheet.* Younger students may need you to provide some context to understand the irony of these predictions.

2. As a class, discuss the difficulties of predicting the future (i.e., impact of unforeseen technologies, social trends, etc). Ask students to identify the developments/factors the *Past Predictions* did not take into account.

3. Explain: *Now it's our turn to make some predictions. Our job is to imagine life in our city 100 years in the future.* Ask students: *How can we make the most accurate predictions possible? What background information do we need?* List student ideas on board. For younger students, explain the strategy of examining current trends to make predictions about the future.

Student Instruction

1. Explain that the class will be dividing into teams to develop a presentation on an aspect of life in your city 100 years in the future. As a class, brainstorm questions about the future of your city. Topics might include: the economy, population, transportation, recreation, cultural institutions, schools, neighborhoods, downtown, open space, water, agriculture, food, and clothing.

2. Divide class into teams of three. Assign or allow each team to choose a topic. Explain that students will develop an oral presentation about their topic in your city 100 years in the future. Each team member should speak during the presentation. The presentation should include an explanation of how the team developed its predictions. It should also include a graphic of some kind (i.e., a drawing, chart, photo, etc) to help illustrate the predictions.

3. Encourage students to be creative in their predictions. Remind students that gathering background information on their topic will make their predictions more informed. Students should consult newspapers, magazines, and books on their topic and ask experts in the community for their ideas and opinions. (i.e., Students predicting the future of schools could interview the principal or district officials.) Encourage students to consult the *Internet Resource List* to see what futurists think about their topic.

Student Activity

1. Each team makes its presentation to the class. If possible, invite parents, other students, community members, and local elected officials to the presentations.

2. As a class, hold a discussion about how the teams' visions of the future for your city fit together. Invite your guests to participate. Ask: *Would you like to live in the city described in the presentations? Why or why not? Is anything missing from this picture of the future? Are any of the visions mutually exclusive? How would you mesh the different visions presented today? What would be the impact on the physical, social, and cultural environment if all these predictions came true?*

3. Create a "The Future of Our City" bulletin board with the graphics created by the teams. Each team should write a caption for its graphic. Also post any themes or unresolved questions that come out of the class discussion on the bulletin board.

Extensions

You may be able to have the graphics from students' presentations displayed in conjunction with the *Yesterday's Tomorrows* exhibition or at another local venue like City Hall. Contact members of your local *Yesterday's Tomorrows* coordinating committee or the state Humanities Council for more information.

Past Predictions Sheet

"Computers in the future may weigh no more than 1.5 tons." — Popular Mechanics, 1949.

"I think there is a world market for maybe five computers." — Thomas Watson, chairman of IBM, 1943.

"There is no reason anyone would want a computer in their home." — Ken Olson, president, chairman, and founder of Digital Equipment Corp., 1977.

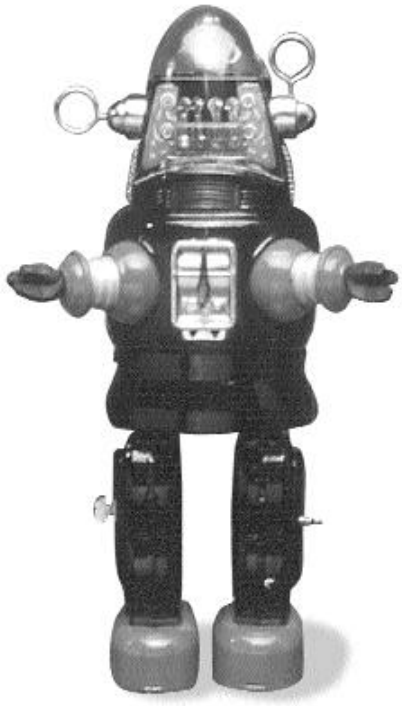
"This 'telephone' has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us." — Western Union, internal memo, 1876.

"Drill for oil? You mean drill into the ground and try to find oil? You're crazy." — Drillers who Edwin L. Drake tried to enlist for his project to drill for oil in 1859.

"Stocks have reached what looks like a permanently high plateau." — Irving Fisher, Yale University Professor of Economics, 1929.

"Airplanes are interesting toys but of no military value." — Marechal Ferdinand Foch, Ecole Superieure de Guerre Professor of Strategy.

"Everything that can be invented has been invented." — Charles H. Duell, Commissioner of the U.S. Office of Patents, 1899.



Internet Resource List

World Future Society
http://www.wfs.org
A nonprofit organization for people interested in how social and technological developments are shaping the future. This site contains numerous forecasts about the future.

The Venus Project
http://www.thevenusproject.com
The Venus Project is a futurist group that advocates an alternative vision for a sustainable new world civilization.

California Partners for Advanced Transit and Highways (PATH)
http://www.path.eecs.berkeley.edu/PATH
PATH is a collaboration between the California Department of Transportation, the University of California, and other private academic institutions and industries. Its goal is to apply technology to increase highway efficiency, safety, and reduce traffic congestion, air pollution, and energy consumption.

Coates and Jarratt, Inc.
http://www.coatesandjarratt.com
This company focuses on forecasts in science, technology, and engineering. Their site contains a variety of articles and links to other organizations.

The Congressional Institute for the Future
http://policy2.gmu.edu/cif/cif/html
A nonpartisan, educational, nonprofit organization offering policy leaders in business and government information about the developing trends. This site contains a variety of briefs on "emerging issues."

High Speed Ground Transportation Association (HSGTA)
http://www.hsgt.org
HSGTA was organized to promote the design, construction, and operation of high speed ground transportation systems in North America.

RAND Corporation
http://www.rand.org
A nonprofit institution that helps improve policy and decision making through research and analysis. This site is a source for information about social and technological trends and provides access to RAND publications and studies.

Intelligent Transportation System (ITS) Joint Program Office,
U.S. Department of Transportation
http://www.its.dot.gov
Contact this organization for more information about the Intelligent Transportation System program in your area, including methods to improve rural highways, public transportation, and safety systems.

Where is the Past in the Future?

Grade Levels: 4-12 • **Subject Areas:** Social Studies, Language Arts, Visual Arts

Objectives

Students will:
- Examine drawings of cities of the future for evidence of history or heritage.
- Identify important local traditions and historic places.
- Evaluate the place of history and heritage in community life.
- Envision how the community will celebrate its heritage 100 years from now.

Materials

"*City of the Future" and "Isolated Masses" Drawings* (1 overhead of each)

Setting the Stage

Tell students: *Imagine you have been transported 100 years into the future and are standing in our city's downtown. Look around you. What do you see?* List student ideas.

Student Instruction

1. Tell students: *During the last century, many Americans have imagined the "City of the Future." Some architects and designers have even made elaborate models and drawings showing what they think cities will look like.*

2. Show overheads of "*City of the Future" and "Isolated Masses" Drawings.* Ask students: *What things do you see in these future cities? What words would you use to describe the cities? Would you like to live in these cities? Why or why not?*

3. Ask students: *Is there any evidence of people's history or heritage in these images? If so, where?*

4. Ask students: *Are there traditions (i.e. festivals, parades, foods, sayings, crafts, etc) or historic places in our city that you would like to pass on to future generations? Why are these traditions or places important to you?* List students responses on the board. As a class, discuss how each tradition or historic place listed enriches the community.

5. Ask students: *Is it important for people to know about the heritage of their city or community? Why or why not? What would it be like to live in a city that didn't value its history?*

Student Activity Options

OPTION 1 *— (appropriate for grades 4-6)*

1. Assign students to draw a picture of a tradition or historic place in your city 100 years in the future. If students choose a tradition, ask them to imagine how it might change over time and what new ways people might have of practicing/celebrating it in the future. If students choose a place, their picture should depict both new elements of the city and elements of the city's past that have been preserved. Challenge students to show how the old and the new can work together to create a better city. (Students drawing a place may want to walk around the school or their neighborhood for ideas.) Ask students to write a title or caption for their picture.

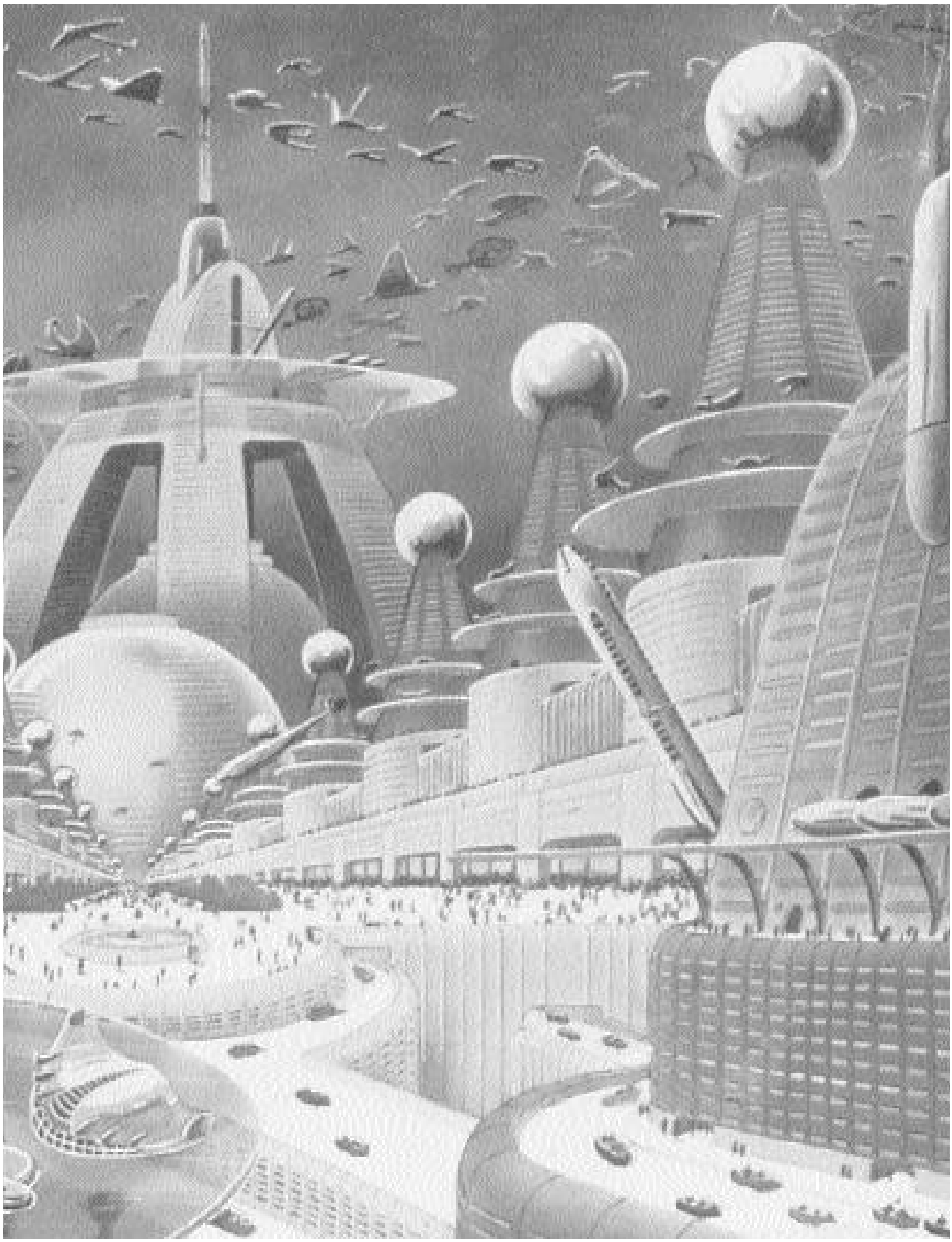
2. Display students' work on a "Future of the Past" bulletin board or in conjunction with the *Yesterday's Tomorrows* exhibition. Contact your local *Yesterday's Tomorrows* coordinating committee or state Humanities Council for more information.

OPTION 2 *(appropriate for grades 7-12)*

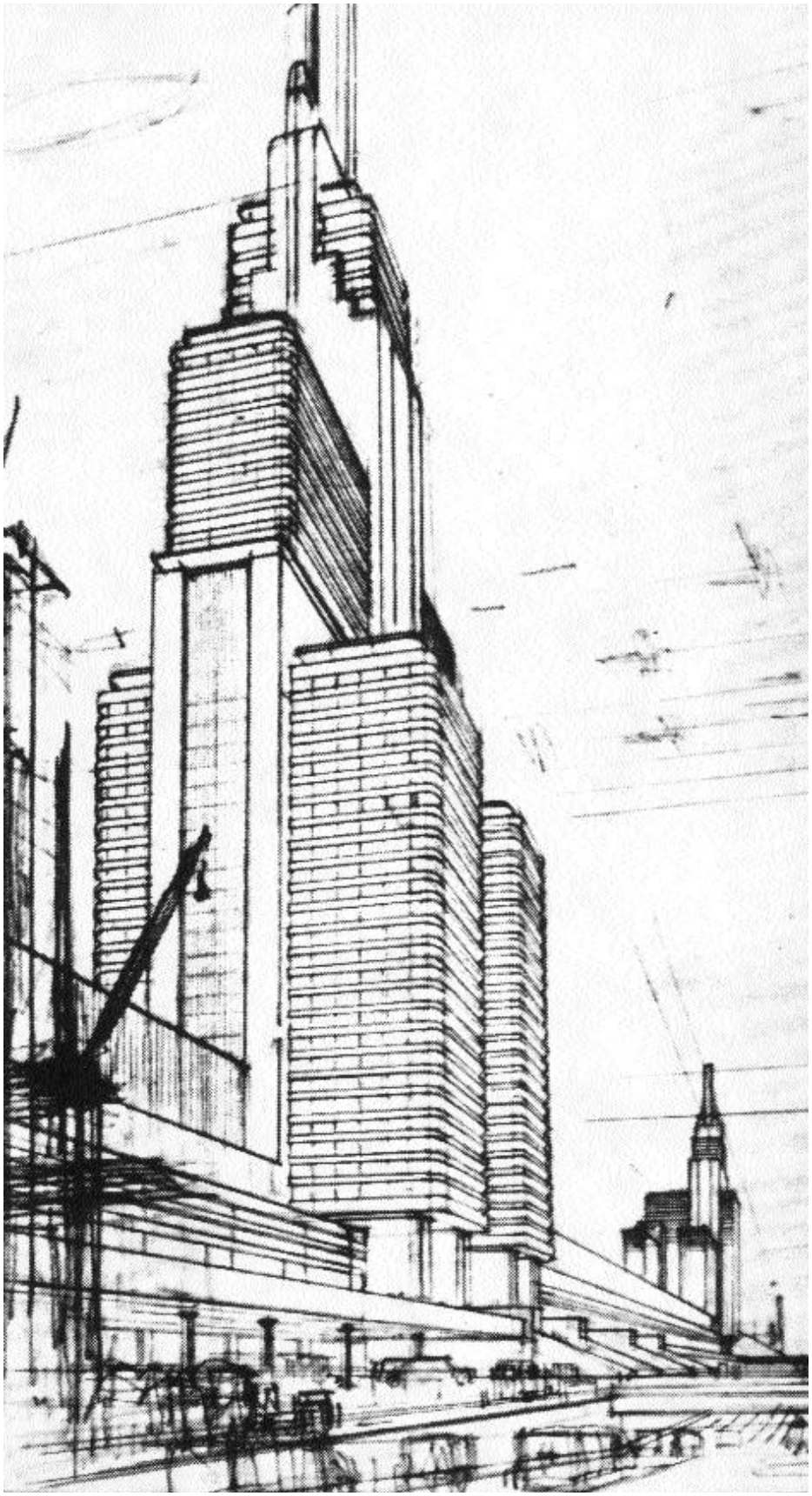
1. Allow students to select an important tradition or place in the heritage of their community for research. Assign each student to prepare a report and display on their topic. The report should discuss: 1) the origins of the tradition or place and its significance in the community; 2) how the tradition or place has evolved over time; and 3) how the student envisions the tradition or place 100 years in the future. Encourage students to visit libraries, the local historical society, and talk with older residents of the community as they conduct their research.

2. Students should collect items for their display such as copies of photographs, postcards, advertisements, newspaper articles, or memorabilia associated with their tradition or place. Students will also create an image of their tradition or place 100 years in the future for their display.

3. Designate a "Future of the Past Day" in your classroom. All students will set up their display and make a copy of their report available for visitors to read. Invite other students at your school, parents, and community members to view the displays. Students should be prepared to discuss their research and explain their vision of the "future of the past" to visitors. If possible, show students' displays in conjunction with the *Yesterday's Tomorrows* exhibition. Contact your local *Yesterday's Tomorrows* coordinating committee or state Humanities Council for more information.



"City of the Future," by Frank R. Paul, back cover of Amazing Stories magazine, August 1939. Reproduced by permission of agent Forrest J Ackerman, Hollywood.



"Isolated Masses: Towers of Steel and Glass," c. 1930 by Hugh Ferriss. Avery Architectural and Fine Arts Library, Columbia University in the City of New York.

Planning our Tomorrows

Grade Levels: 4-12 • **Subject Areas:** Social Studies, Language Arts

Special thanks to Envision Utah for providing the Envision Utah Chip Game to schools in Brigham City, Payson, and Hyrum, Utah.

Objectives

Students will:

- Differentiate between predicting and planning the future.
- Discuss the importance of planning for individuals and communities.
- Develop a plan for the future of their community by playing a game.
- Role play various interest groups in the community.
- Evaluate the plan developed by the class.

Materials

Role Playing Information Sheets (1 copy)
Envision Utah Chip Game Instructions
Envision Utah Chip Game

(This game is available for check out in the media centers of schools in Brigham City, Payson, and Hyrum. It includes a map of the local area and "chips" to represent population growth. If you do not live in one of the communities listed above, you should be able to obtain a map and information about growth issues in your area by contacting your local planning department or quality growth commission. The basic format of the game is applicable to almost any community in the country. You should be able to replicate it using the *Envision Utah Chip Game Instructions*.)

Dry erase markers and tape

NOTE: If your class has more than 20 students, you may wish to divide the class in two and play the Envision Utah Chip Game with half your students at a time.

Setting the Stage

1. Differentiate between predicting and planning the future. Explain that predictions are educated guesses while plans set goals and lay out the steps for achieving the goals.

2. If students have been to the *Yesterday's Tomorrows* exhibition, ask: *Were the ideas we saw in the exhibition predictions or plans? Why?*

Student Instruction

1. Ask students: *What would your life be like if you made no plans? Could you go on a trip? Save for something special? Go to college? Have a career?*

2. Ask students: *Is it important for a community to have a plan for its future? Why or why not?*

3. Explain that students are going to develop a plan for the future growth of your community by playing a planning game. Divide students into five teams and give each team one of the *Role Playing Information Sheets.* Explain that during the game, each team will represent a different interest group in the community. Make sure students understand the perspective of their interest group.

4. Before beginning the game, set ground rules for behavior such as: 1) no interrupting a person while they are speaking, 2) always address other students with respect, 3) keep comments brief and to the point. Remind students that each team has valid interests and there is no single right answer to the questions they will be tackling. Explain that the goal of the teams should not be to dictate the plan, but rather to defend those interests most important to them while reaching a compromise that is good for the community. Point out that being a responsible citizen means understanding all the points of view on an issue before making a decision.

Student Activity

1. Play the Envision Utah Chip Game according to the instructions. Make sure each team has a chance to participate.

2. Assign the students to write an essay. Tell students: *Imagine you can make all the planning decisions for our community. Write an essay explaining what your most important goal for our community would be and how you would achieve this goal.*

Extensions

Choose one of the issues from the Envision Utah Chip Game and find out what plans are being made regarding this issue in your community. The local planning department should have information. Do you support the goals of this plan? Why or why not? If not, what should the goals be? Find out how students can help achieve community goals that are important to them.

Role Playing Information Sheets

1. Real Estate Developers

Real estate developers tend to favor expansive growth. They want to build as many new buildings and develop as much new land as possible. They argue that this kind of growth is good for a community because it brings new businesses, new jobs, new families, and more money. These things, they say, are the most important to the quality of life in a community. Building new developments is also how they make money.

2. Farmers and Ranchers

Farmers and ranchers tend to be divided in their views of growth. Some farmers and ranchers worry that development will gobble up all the agricultural land in a community. They fear they will be put out of business and will have to give up their way of life. They also believe the quality of life in the community will go down if all the open farm land is developed and their traditional way of life vanishes. Other farmers and ranchers want to sell their land to developers. They are ready to get out of the agriculture business and hope they can make a lot of money in the sale.

3. Downtown Business Owners

Downtown business owners tend to favor some kinds of growth and oppose others. They want new businesses to come to the community, but they want the development to take place in the downtown area rather than on the outskirts of town. They worry that if big new business developments are constructed on the edge of town, people will stop coming downtown and they will go out of business. Downtown business owners also say that enhancing the community's downtown will improve the quality of life. It is the downtown, they argue, not the new "big box" developments, that give a community character and vitality.

4. Open Space Advocates

Open space advocates oppose expansive growth. They say preserving open spaces, like farms, foothills, wetlands, and parks, is important for both the environment and the quality of life in a community. They also point out that growth has many costs for the taxpayers in a community, such as building more roads and schools, more congestion, and more pollution. Open space advocates want to limit the areas where development and growth can occur. They would like new developments to be dense (more people/buildings per square mile) so more land will be left for open space.

5. Local Government Officials

Local government officials have a difficult balancing act when it comes to future growth. On one hand, they want new businesses and new people to move to their city because they will pay taxes to the city government. With more money, the city can do more projects. One the other hand, growth has many costs to the city government, like building new roads and sewers. There are also indirect costs like more congestion and pollution. Government officials know that if growth is handled badly, their city will become an unattractive place to live and no new businesses or people will want to move there anymore. Finally, government officials have to consider the wishes of the citizens who elect them. Many times, citizens in a community have very different opinions about growth.

Envision Utah Chip Game Instructions

Step 1 - Introduction
Help students familiarize themselves with the map. For example, help students locate their school or home on the map. Review the legend and scale on the map to make sure students understand what the different colors and symbols represent (i.e. wetlands, city boundaries, public lands, etc.).

Step 2 - Discussion of coming trends
Facilitate a discussion on the issue of growth. Remind students to adopt the perspective of the group they are role playing in their answers. Students do not need to reach agreement, but should try to find out more about each groups' point of view.

Ask students:

- *What new trends or changes might affect the way we live and work in our community in the next 50 years?*
- *What is a good lot size for development in our community? For example, should residential lots be 1/3 of an acre, 2/3 an acre, 1 acre, 5 acres, or 10 acres? (Use map to demonstrate these different lot sizes.) Why is this a good size?*
- *Is it important to preserve agricultural land? Why or why not? What does agricultural land contribute to life in our community?*
- *Is it important to preserve open spaces and sensitive lands like foothills and wetlands? Why or why not? What do these places contribute to the community?*

Step 3 - Where not to grow (mark in green)
Maintaining their role playing identities, students work together to delineate areas that should not be developed. Remind them that compromise will be necessary. Help students identify areas they might want to exclude from development, such as public lands, steep slopes, flood plains, wetlands, parks, agricultural lands, or hazardous waste sites. When the students reach agreement, outline the areas protected from development with the green dry erase marker and fill them in with a recognizable pattern.

Step 4 - Where to grow through reuse and infill (mark in purple)
Maintaining their role playing identities, students work together to delineate areas where development through reuse or infill may occur or is desirable. Explain to students that "reuse" refers to recycling existing land with buildings on it by rehabilitating old buildings or constructing new ones. "Infill" refers to constructing new buildings in empty lots in an area that already has some development. Help students identify areas they might want to target for reuse and infill, such as older business, warehouse, or factory districts. When students reach agreement, outline the areas for reuse and infill with the purple dry erase marker and fill them in with a recognizable pattern.

Step 5 - Where to grow through new development (mark in brown)
Maintaining their role playing identities, students work together to delineate areas where new development is desirable. Don't worry about specifying whether the development is commercial, residential, or industrial. When students reach agreement, outline the areas for new development in brown and fill them in with a recognizable pattern.

Step 6 - Allocate population chips for 2020
Maintaining their role playing identities, students work together to place the 2020 population chips on the map. The chips represent project 2020 population growth and the land such growth would occupy if development occurred at current densities. Each chip is 40 acres. For Brigham City, one chip represents 345 people. For Payson, one chip represents 396 people. For Hyrum, one chip represents 360 people. Affix the chips to the map with tape. Chips can be stack to increase density. The stacking limit is 2 chips.

Step 7 - Discuss and draw conclusions
Students shed their role playing identities and discuss the plan they developed. Ask students: *Would you like to live in the community we planned today? Why or why not? What will be the costs to the community of your plan? How did growth affect the lands you wanted to protect? What would you do differently? What do you like best about the plan?*

Step 8 - Clean up
Please erase the marker from the map and carefully remove the chips so the game will be ready for the next class.

"Houses Like Fords"

Grade Levels: 4-12 • **Subject Areas:** Social Studies, Math, Science

Objectives

Students will:

- Compare traditional construction with prefabricated housing through a demonstration.
- Analyze historic advertisements for prefabricated houses.
- Determine the size, number, and kinds of rooms by looking at a floor plan.
- Examine how the rooms in a house reflect the lifestyle of the people who live in it.
- Design an affordable, low-maintenance home for a family in 2050.

Materials

Team 1 Instruction Sheet
Team 2 Instruction Sheet
Prefabricated House Ads (1 overhead each and 1 copy per student)
300 - 400 Duplo blocks
roll of aluminum foil
200 river rocks 1-3" long (river rocks are available in relatively small bags at garden and home improvement stores)
4 jars of Play-Doh
twigs
scissors
measuring tape
graph paper
drawing paper
art supplies

Setting the Stage

1. Tell students: *Today we're going to experiment with two different methods of building homes to learn more about a plan for building the "Home of Tomorrow" developed nearly 70 years ago.* Select six students to participate in a demonstration and divide them into two teams of three. Give Team 1 the Duplo blocks, aluminum foil, and *Team 1 Instruction Sheet.* Give Team 2 the river rocks, Play-doh, twigs, scissors and *Team 2 Instruction Sheet.* Allow each team time to review their instructions and make sure teams understand them.

2. Explain that each team will have five minutes to assemble as many houses as they can according to the directions on their *Instruction Sheet.* Tell students to carefully observe the different construction methods used by the two teams. Instruct the teams to begin construction and stop them at the end of five minutes.

3. Ask students: *How were the construction methods of the two teams different? How were their materials different? How are the houses they built different?*

Student Instruction

1. Explain: *During the Great Depression of the 1930s, some architects interested in designing homes for the future adopted the slogan "Houses Like Fords." They want to use the assembly line technology pioneered by Henry Ford for building automobiles in the construction of houses. They envisioned building prefabricated houses using standardized plans, standardized building components, and modern materials like steel or copper. Much of the house would be put together at a factory and then shipped to the purchaser's lot where it could be assembled very quickly. This way, many houses could be produced rapidly to meet the nation's severe housing shortage.*
   Ask students: *Which of the teams was building "Houses Like Fords?" Why?* (Younger students may need more explanation of assembly lines and standardized parts.)

2. Distribute copies of *Prefabricated House Ads* to each student and show overheads. Ask students: *According to these ads, what are the advantages of prefabricated homes? Why are they supposed to be cheaper than traditional homes? Why are they low maintenance?*

3. Tell students: *Let's examine the prefabricated houses more closely to find out what it might be like to live in one.* Have students look at the floor plans of the Copper House. (For younger students, explain that a floor plan is a map that shows where the rooms in a building are and how big they are.) Ask students to count the number of rooms in the house and look at the names of the rooms. Ask students: *What rooms are not typical in houses built today? What do you think these rooms were used for?*

4. Select two students to use a measuring tape to measure out the size of one of the bedrooms and the kitchen in the Copper House on the classroom floor. Ask students: *How do the size, number, and kind of rooms in the Copper House compare to those in houses built today?* (Younger students may need help figuring how large the rooms in houses built today are.) *Do you think the Copper House reflects the lifestyle of the 1930s or a futuristic lifestyle? Why?*

5. Explain: *Very few of the prefabricated houses manufactured by General Houses and Copper Houses, Inc. were ever built. In fact, the only four copper houses we know of were built as model homes in the town of Copperton west of Salt Lake City near the Kennecott Copper Mine. People still live in these houses today. Historians aren't sure why the prefabricated houses did not become popular, but think people just liked the idea of a traditional home better.*

6. Ask students: *Are there any ideas from the prefabricated houses that influence the way buildings are built today?*

Student Activity

1. As a class, review the goals of the champions of prefabricated houses in the 1930s (i.e. affordability, low-maintenance, variety of plans, easy to assemble). Tell students: *Now that we've examined how some architects in the past tried to meet these goals, it's our turn to imagine how they might be met in the future.*

2. Divide students into teams of two to three. Assign each team to develop an affordable, low-maintenance home for the family of 2050. Tell students their house should reflect the building materials, technologies, and lifestyles they think will be important in the future. Each team should draw a floor plan of their home using graph paper, an elevation of the home (picture showing what it looks like from the outside), and write a description of their home's features.

3. Teams prepare a short presentation on their home of the future to share with the class.

Extensions

Ask students to find out if there are any prefabricated houses from the 1930s, 1940s, or 1950s in your community. Your local planning department or historical society may have some information on this topic. If possible, invite someone who lived in an historic prefabricated house to speak to your class about how and why the house was built and what it is like to live in it.

Have students build a model of their home for the family of 2050. Host a "Home of 2050 Fair" in your classroom. Invite other students, parents, and community members to come look at the models. Display models in conjunction with the *Yesterday's Tomorrows* exhibition. Contact your local *Yesterday's Tomorrows* coordinating committee or state Humanities Council for more information about displaying your students' work.

Team 1 Instruction Sheet

Your job is to build as many houses as you can in five minutes using the instructions below. **Read the instructions carefully** and then wait for you teacher to give you the signal to begin.

1. Two people on your team will build walls for your houses. The walls should be 2 double Duplo blocks wide and 5 Duplo blocks high. Look at Figure #1 to see how the walls should look when you are finished. To make your walls hold together, it is important that you start with two double Duplo blocks, end to end, on the bottom layer. Then put another double block on top of these two in the middle to connect them. Look at Figure #2 to see how to make the base of your walls. After you make the base, build the rest of the wall with single blocks.

2. One person on your team will take the walls and make houses. Put four walls together so the ends overlap. Then use double Duplo blocks to connect the walls at the corners. Look at Figure #3 to see how to connect the walls. Next finish the top layer with single or double Duplos. Finally, make a flat roof for your house with a piece of aluminum foil.

Good luck and have fun!

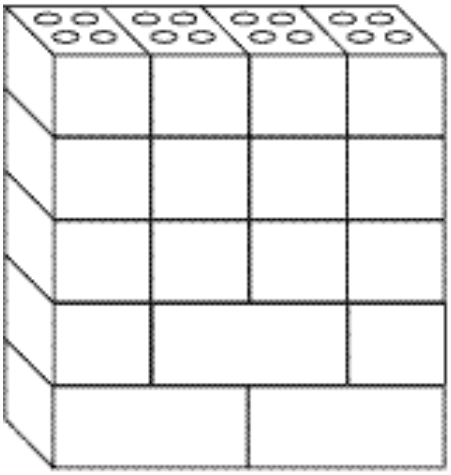


FIGURE 1

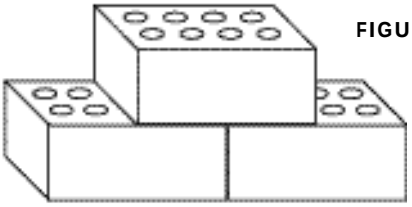


FIGURE 2

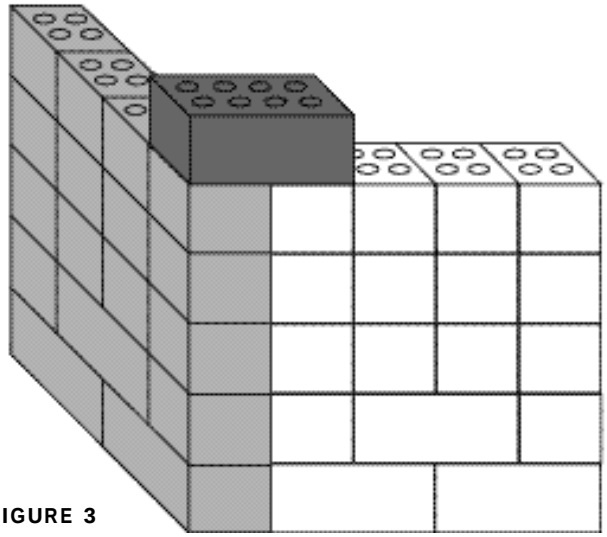


FIGURE 3

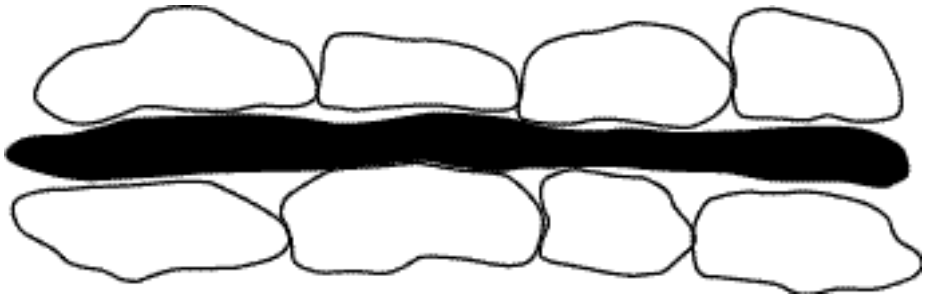
Team 2 Instruction Sheet

Your job is to build as many houses as you can in five minutes using the instructions below. **Read the instructions carefully** and then wait for you teacher to give you the signal to begin.

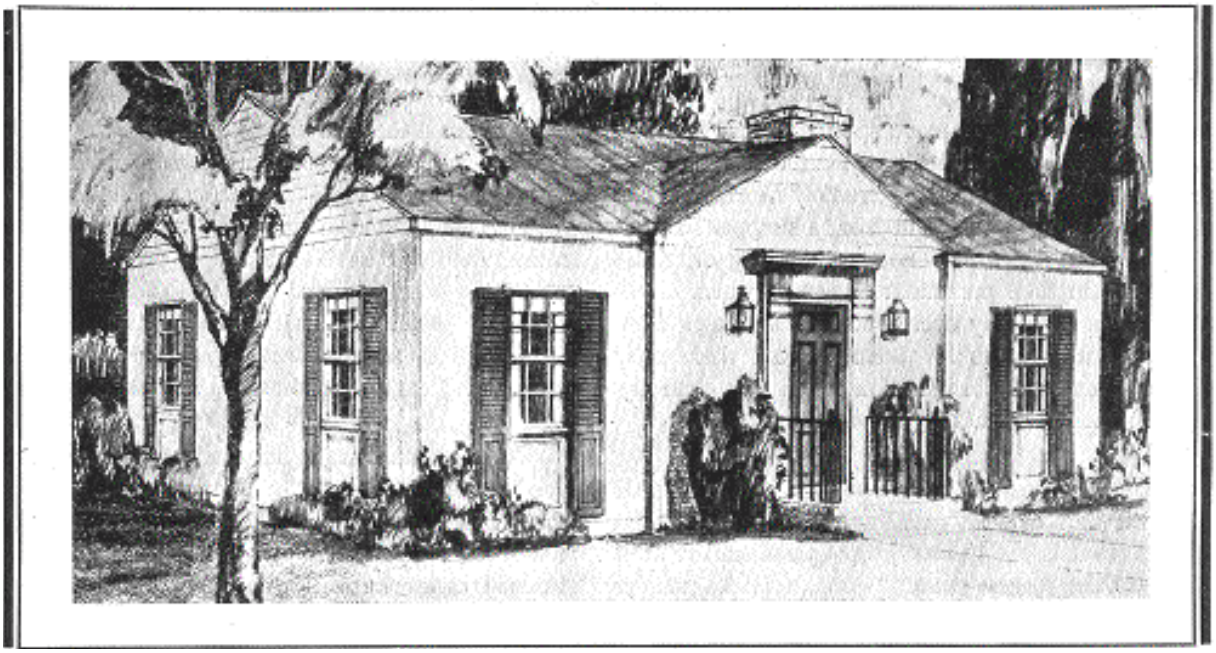
1. The members of your team should use rocks and Play-doh to build the walls of your houses. First, make an outline of the shape of your house with rocks. Your house should be at least as wide and deep as a paperback book. Then roll some Play-doh into a snake the length of one of the walls. Flatten the snake and put it on top of the wall of rocks. Then repeat with the other walls. Now put another layer of rocks on top of the first layer and gently press them into the Play-doh as shown in the drawing below. You may need to use little bits of Play-doh to fill in gaps or steady a wobbly rock. Repeat the layers of rocks and Play-doh until the walls are at least 4 rocks tall.

2. When the walls are finished, make roofs for your houses with twigs. Either cut the twigs or break them to the right length and lay them across the top of your house until it is covered.

Good luck and have fun!



UTAH'S FIRST PREFABRICATED HOUSE USES UTAH COPPER

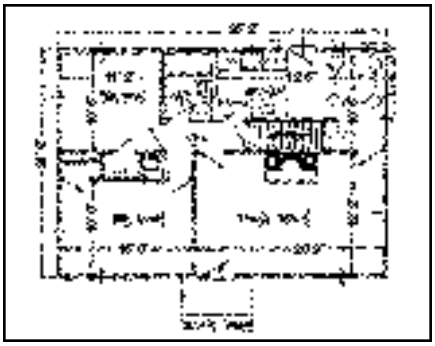


Architect's Drawing of Prefabricated Copper House Being Erected At Copperton By Utah Copper Company.

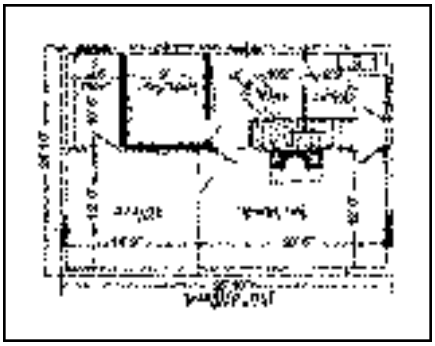
Copper Houses, Inc., an associate of Utah Copper Company, is vigorously developing copper homes as the modern residence of today. Groups of copper houses are now being erected by contractors in several Eastern Cities.

Copper houses are attractive, they endure, have low maintenance cost and are moderate in cost. These prefabricated homes may be designed by local architects or by Copper Houses, Inc., and erected by local contractors.

Inquiries are invited from contractors and individuals.



Floor Plan



Basement Plan

COPPER HOUSES, INCORPORATED

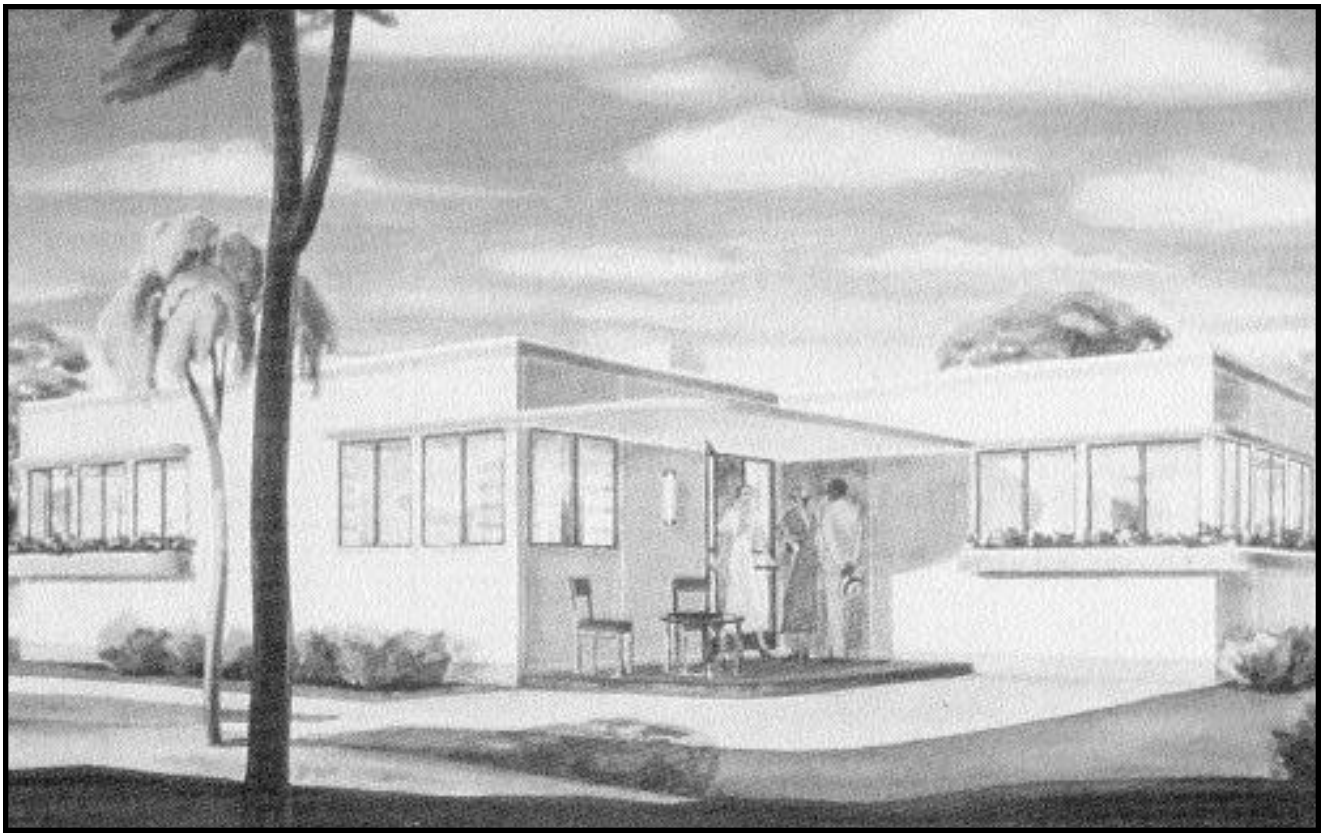
Rust Building
Washington D.C.

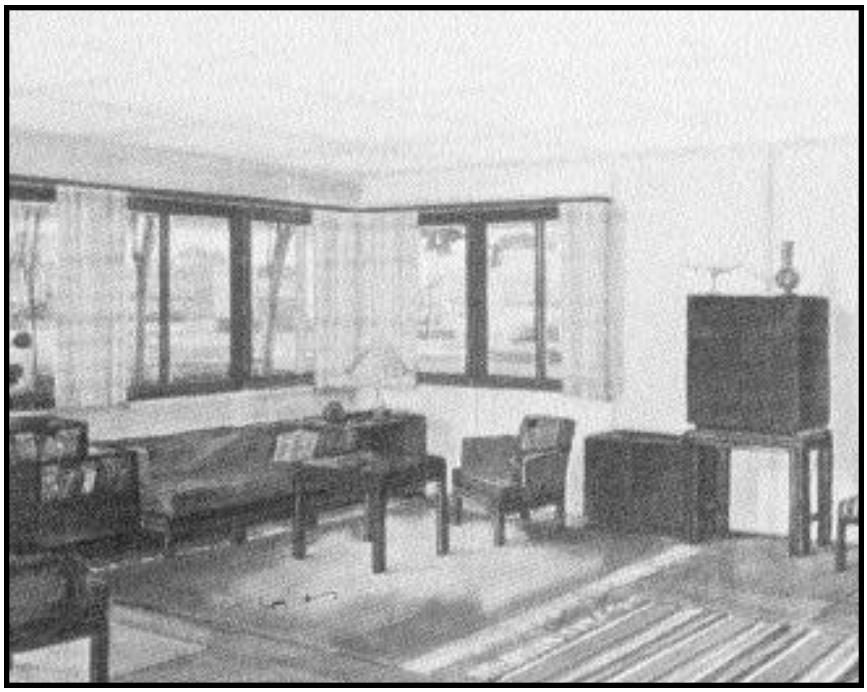
Or, Wrtie or Call

UTAH COPPER COMPANY

Kearns Building – Wasatch 140
Salt Lake City, Utah

ALL HOMES BY COPPER HOUSES, INC., USE UTAH COPPER





HOWARD T. FISHER, architect Drawings by Harringer-Jacobsen-Calvin

$K_2 H_4 O$

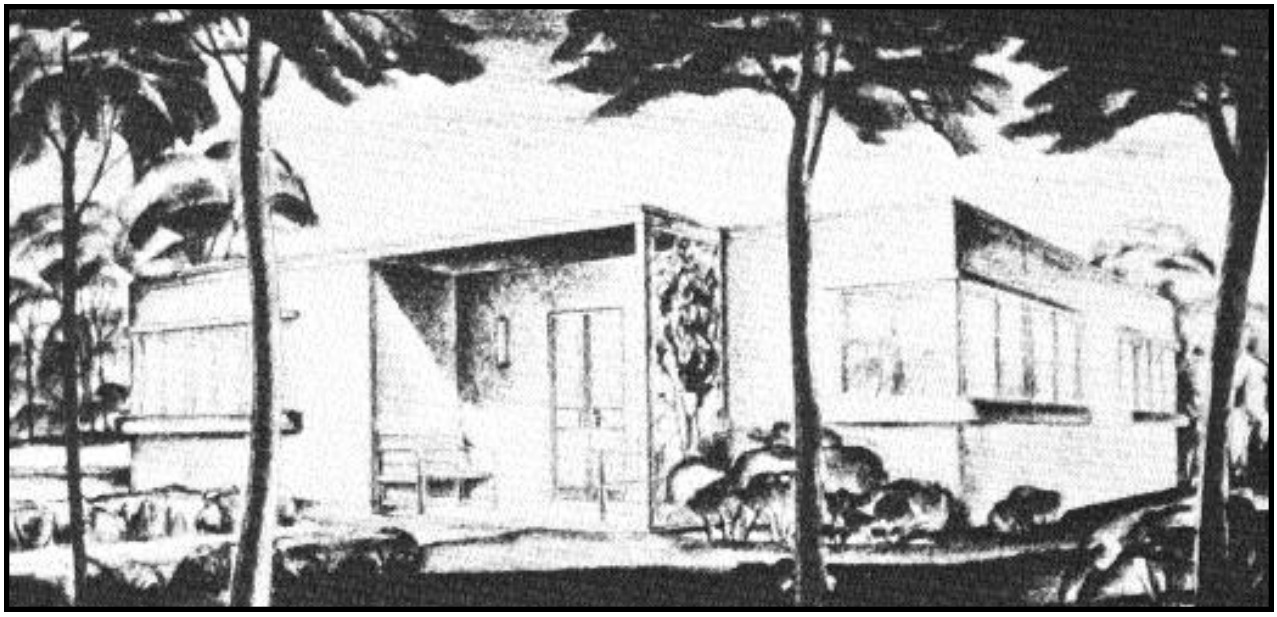
One of the proposed products of General Houses, Inc.

$K_2 H_4 O$ is an architectural, not a chemical, formula. It represents, upon the drafting boards of General Houses' architects, the pre-fabricated house shown above in perspective, and opposite in plan. Life in the steel house will not differ extravagantly from life in the builder-built bungalow – as the illustration upon the left suggests. But frames in $K_2 H_4 O$ will not shrink, walls will not sag, windows will work, doors will latch, heaters will heat, ventilators will ventilate, repairs will be few, and cost will be $3,500.

**Note: "K" refers to the basic housing type; "2" indicates a subdivision of that type. "H" expresses entrance through a hall. "4" means that there is space for four beds in two bedrooms. "O" stands for an optional extra room*

"K_2H_4O" Advertisment for General Houses by Howard Fisher, Fortune, July 1932. By permission of the Harvard University Archives.

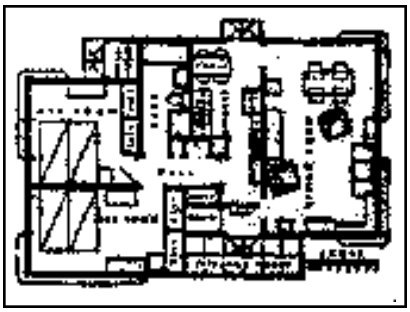
We will deliver this five-room house to you this very week!



THIS ANNOUNCES a revolution in the marketing of houses! Now you can come to our showroom and pick out your house just as you do your automobele. In a surprisingly short time you move into it. Everything is in place . . . lighting, plumbing, heating, refrigeration. Not one thing must you add!

The cost to you . . . that is even more amazing! Volume production makes it possible to sell these modern, pre-fabricated houses in a variety of designs and sizes for about one-half of what it would cost you, or anyone, to build. All financing, even to furniture and landscaping if you wish, is handled by a single company. You know to the penny how much your home will cost per month or year – complete.

Thank engineering skill and mass production for this revolutionary achievement. General Houses, Inc., with the cooperation of leading manufacturing companies, now follows the volume production methods of the automobile industry to save you money on the designing, production, erection, equipping and financing of houses. These houses, delivered and erected on your lot, are the first efficient, pre-fabricated, low cost houses ever perfected. General Houses, Inc., Chicago, Illinois.



Above are plans of one of many modern, pre-fabricated houses we have designed to sell at a price never before possible. This particular model is a favorite for small families. You have your choice of a wide variety of designs and sizes to accommodate from two to eight people. For further information call at our nearest showroom or write for free booklet which illustrates and describes the many models available, their construction, equipment, cost and our complete financing plan.

GENERAL HOUSES

General House hypothetical advertisment, "We Will Deliver This House," Fortune, 1932. By permission of the Harvard University Archives.

Sending a Message to the Future: A Community Time Capsule

Grade Levels: 4-12 • **Subject Areas:** Social Studies, Language Arts

Objectives

Students will:
- Review important aspects of life in their community.
- Decide what makes their community unique.
- Select an object representing the community for inclusion in a time capsule.
- Write a letter to the future.
- Explain the significance of the object they selected for the time capsule in an oral presentation.

Materials

Time Capsule Resource List
Class will determine what materials to collect for the time capsule and what to use for a time capsule container

Setting the Stage

Ask students: *Imagine you want people 100 years in the future to know about your life. What would you want to tell people in the future? How would you send your message to the future?*

Student Instruction

1. Explain that students will send a message to the future about their community in a time capsule. (Younger students may wish to focus on a smaller area, like their neighborhood, while older students can focus on a whole city or set of closely linked towns.) As a class, discuss what people in the future might want to know about your community. Brainstorm and write down as many aspects of life in your community as possible. As an aid for brainstorming, start with categories such as: people, places, businesses, traditions, cultural institutions, etc. Encourage students to be broad and inclusive in their thinking.

2. Ask students: *What makes our community special? What makes it different than any other place?* List and discuss student ideas.

Student Activity

1. Divide students into teams of two. Allow each team to select a different aspect of community life listed during the brainstorming. Assign each team to choose and obtain (or make) an object that represents their aspect of community life for inclusion in the time capsule. Younger students may need to review the idea of how an object can represent something larger than itself and discuss some examples. Encourage students to think carefully about their choice and ask family, friends, and neighbors for ideas. Remind them that their object should reflect something special or unique about your community.

2. Select or design a time capsule container so students will know what size items can fit in it. The teacher can make this choice prior to beginning the lesson or allow the class to brainstorm possibilities. For suggestions on time capsule containers, see the websites on the *Time Capsule Resource List.*

3. As a class, decide where and how the time capsule will be stored and when it will be opened. Develop a system to make sure people remember to open the time capsule at the time you select. See the websites on the *Time Capsule Resource List* for suggestions. For example, the International Time Capsule Society will register your time capsule for free.

4. Assign each student to write a letter to the people who will open the time capsule in the future explaining why your class made the time capsule and the significance of the object they selected for the capsule.

5. Invite other students in your school, parents, and community members to a "Time Capsule Sealing Ceremony." During the ceremony, each team of students should explain the significance of their object before placing it in the time capsule.

6. Deliver the time capsule to its storage place.

Time Capsule Resource List

The International Time Capsule Society (ITCS) - http://www.oglethorpe.edu/itcs
The ITCS was established in 1990 to promote the careful study of time capsules. It strives to document all types of time capsules throughout the world and maintains a time capsule registry. You can register your time capsule with ITCS for free. The ITCS website also includes information on how to set up a time capsule, a list of the Nine Most Wanted Time Capsules, and the story of the first modern time capsule — swimming pool-sized Crypt of Civilization.

Reunion Time Capsule - http://www.ustimecapsule.com
The site offers good instructions and questionnaires for creating a time capsule. For a modest fee, this company will store a time capsule submitted by your class in a climate controlled environment and return it to students on their 20 or 30-year class reunion. Alternatively, the time capsule can be returned to the same grade level in 25 years. All schools are welcome to participate.

Future Packaging and Preservation - http://www.futurepkg.com
This company sells all sizes and types of time capsules, signature scrolls, acid-free supplies, time capsule preservation kits, plaques, etc. They also offer a toll-free consultation number.

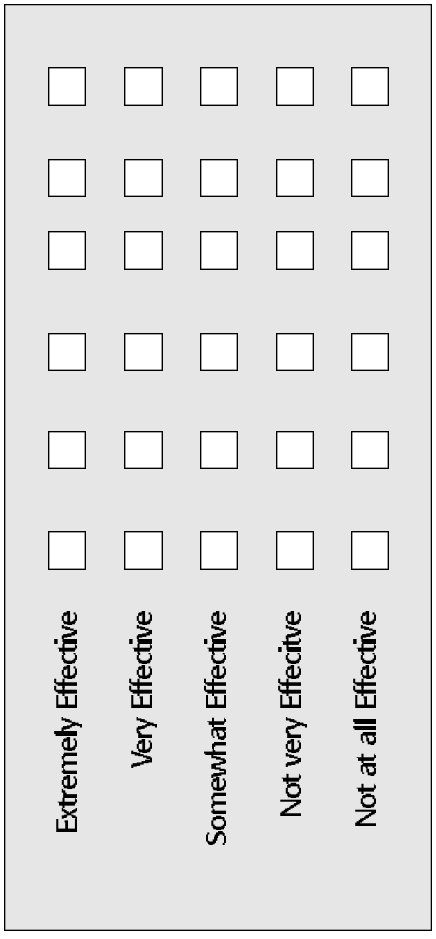
The Yesterday's Tomorrows Teacher's Guide Evaulation Form

Utah Heritage Foundation is committed to providing high quality education programs for students and teachers. Your input is vital to helping us improve our programs. Send your completed evaluation form to: Utah Heritage Foundation, P. O. Box 28, Salt Lake City UT 84110-0028. Thank your for assisting us with your comments and suggestions.

Name:_____ Grade Level: _____

School / City: _____ Date:_____

The Yesterday's Tomorrows Teacher's Guide (scavenger hunt and lesson plans) was designed to promote student understanding in several areas. Some of these areas are described below. Please use the rating scale in the left-hand column to respond to the following questions.



How effective was *The Yesterday's Tomorrows Teacher's Guide* in:

1. Enhancing the educational value of your students' visit to the *Yesterday's Tomorrows* exhibition?

2. Helping students think critically about the future of their community?

3. Helping students identify and explore aspects of their community's heritage?

4. Strengthening students' understanding of how the design of the built environment shapes our lives?

5. Developing students' critical reasoning skills (e.g., analyzing, making predictions, evaluating)?

6. Providing opportunities for community members to share in and celebrate students' work?

Please list the lessons you used: _____

_____

What is your overall evaluation of *The Yesterday's Tomorrows Teacher's Guide* learning experience for students? Please circle your rating.

5 - Superb 4 - High Quality 3 - Adequate 2 - Fair 1 - Poor

What would you tell other teachers about *The Yesterday's Tomorrows Teacher's Guide* learning experience?

_____

_____

_____