SHAPING OUR

FACILITATOR'S GUIDEBOOK

"In most curricula students are reduced to passive receivers of knowledge, but in Shaping Our Future students are allowed to actively acquire knowledge through a series of learning levels. They recall, research, analyse and finally make judgments. What is more striking is that the process encourages people to think about future possibilities and make contributions to shape a future of their choice. The activities for the students are exciting, the resources are adequate and relevant and there is a lot of learning that takes place."

- *Servious Mbiza,*
  High School Teacher at a WorLD Centre in Masvingo, Zimbabwe

"What makes this book special is that it shows how, with limited time and money, a scenario workshop can be designed and administered so that a group of young people can have the deeply liberating experience of what it means to shape a destiny — or two or three."

- *Betty Sue Flowers, Scenario Writer and*
  Director, Lyndon Baines Johnson Library and Museum

"Scenario planning has proven itself to be an invaluable tool in helping major corporations address the critical uncertainties of their marketplaces. Shaping Our Future takes the powerful ideas behind this process and makes them accessible to anyone who is willing to pause and reflect on how the world around them is changing and how they want to be engaged in that evolving world. A timely guide for these uncertain times and a critical skill for all our young people!"

- *Ed Claassen, Vice President - Consulting Services,*
  The Grove Consultants

"Having done a Shaping Our Future Institute with young people who have many difficult challenges, I can say that the process is great for focusing energy and interest into an enthusiasm and a vision for a better world. When people can envision what their future could be and understand the driving forces that are shaping that future, then they can gain more control and start to make a difference and start pushing for specific change. It's very empowering."

- *Jen Ciardelli, Teacher, Champlain Valley Union High School*

Creating future scenarios has a powerful impact on students far beyond the classroom. As students work in groups they gain a sense of empowerment by listening to varied viewpoints, researching forces that drive our society and ultimately creating imaginative scenarios for tomorrow's world.

- *Al Fletcher, Teacher, Williston Central School*

Shaping Our Future is an opportunity for young adults to create scenarios of the future that will help them successfully navigate the complexities of life, and enable them to reach their dreams.

- *Bradley F. Smith, PhD., Dean of Huxley College,*
  Western Washington University

Shaping Our Future

Facilitator's Guidebook

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Acknowledgements

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We especially would like to thank the following for the time and effort they have given in developing this guidebook: Heidi Soule, Keith Wheeler, Christian Crews, Ulrich Goluke, Betty Sue Flowers, Ellen Furnari, Megan Camp, Tony Blueter, Mai Ngyuen, Adeline Mirabal, Bob McCabe, Debra Moffitt, Jennifer Ciardelli, Marion Jay, Randy Crump, Roy King, Donna Culver, Donna Gilley, Alec Webb, Steve Hulbert, David Sibbett, Ed Claassen, Andy Alm, Anthony Bloome, Servious Mbiza, Lockias Chitanana, Shawn Perry, Colette Foster-Weston, Greg Tefft, Karen Cohen, Sue Brown, Reginald Beatty, Neil Shorthouse.

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Foreward

Facts, Fiction, and the Future

Betty S. Flowers,

Scenario Writer and
Director, Lyndon Baines Johnson Library and Museum

As a futurist, the question I'm most often asked is, "What is the future going to be?" I always answer that the future is unpredictable—and that, therefore, any story about the future is a fiction. The futurist is not so much a fortune-teller as a storyteller.

What kind of story is the most useful when it comes to the future? The answer to that question is: the story that is created by the people who will live in it. Scenario-building is a powerful process because as people create fictions of the future together, they begin to experience how much power they have to tell their own story—and thus, to create their own future.

The power of storytelling can be seen most clearly in the life of an individual. Each of our lives is a collection of facts. And these facts have actually happened. There's nothing we can do to change them. But the facts are embedded in a story we tell about ourselves. And while the facts of the past are beyond our ability to change, the narrative of the facts is completely in our power to shape. The reason this is important, especially for young people, is that the future is shaped not by the facts, but by the story we tell about these facts.

For example, suppose someone had a terrible disease as a child. This fact could be embedded in a hero story—"against great odds, after overcoming a terrible disease, Robert managed to get his high school degree." Or we could tell the story as a victim story—"Because of his disease, Robert was forced to spend twice as many years in high school as his friends." Or the story could be told as a history of learning—"After contracting a terrible disease, Robert learned how to be patient. And this patience, developed to a high degree, was crucial to his successful career as a psychologist." Depending on the story you're telling—whether that story is about the past, the present, or the future—the facts can "make" you a hero, a victim, or a learner.

The power to tell our own story about who we are and who we might become is one of our least acknowledged powers. Most young people unthinkingly accept the stories that are given to them by their parents and their culture. And many of these stories, especially those that come from the commercial side of our culture, are useless, or even actually harmful. They implicitly tell us that we are not thin enough or rich enough or something else enough—which is why we need to buy a particular product to be thin or rich or something else.

Scenarios are antidotes to the implicit stories we find in popular culture because they are explicitly constructed rather than unconsciously accepted. Scenarios also function to educate the imagination by helping it to be flexibly oriented toward the future. This flexibility means that we approach the future not with a belief about what it will be, but with a set of possibilities—two or more scenarios that encourage us to think about the future in different ways.

Many large corporations spend a great deal of time and money to build useful, challenging scenarios. What makes this book special is that it shows how, with limited time and money, a scenario workshop can be designed and administered so that a group of young people can have the deeply liberating experience of what it means to shape a destiny—or two or three.

Preface

" The future belongs to those who believe in the beauty of their dreams."

Eleanor Roosevelt

The Foundation for Our Future, the Center for a Sustainable Future and Shelburne Farms have joined together to initiate a new program for young adult leadership called **Shaping Our Future**.

Our findings, from over a decade of working with young adults in the area of environmental and sustainable education, pointed to some alarming observations. Young adults spend little time thinking about the future. Polls have shown that average teenagers future time reference typically ranges from hours to at best a couple of months. We began to juxtapose these findings with the work in which we have been involved for two decades now - trying to educate for a sustainable future. We have come to the conclusion that the majority of young adults do not have the context (in terms of a future time frame of reference) to meaningfully engage in action that this educational paradigm strives to stimulate. That revelation brought us to the world of strategic planners in multi-national corporations to learn about the tools they use to stretch their thinking and envision the future.

There we discovered the world of scenario planning, and set out to develop a set of processes, tools and methodologies that young adults could employ to help them actively shape their future and that of the communities where they live. We were fortunate to work with some of the best scenario planners in the world to create a process that has the rigor and depth necessary to provide young adults with the same future thinking skills as those of executives at the world's leading corporations. Scenarios are imaginative portrayals of potential futures, where the process is as important as the pictures they help develop. Young adults are engaged in deep conversations, at once free-flowing and rigorously constrained. These conversations are designed to help young story tellers see past their own cultural blind spots, and to think the unthinkable.

We have spent two years developing and piloting a set of methodologies and tools to help young adults visualize the possible worlds in which the unthinkable, the unimaginable, and the unpredictable actually come to pass. We have packaged this process into a program called **Shaping Our Future**, which will be distributed to many regions around the globe.

If a generation of young adults can imagine many possible worlds, then they can better prepare themselves for whatever future does come to pass. As they engage in this process of confronting their future, they can become enthusiastic about to shape a future that will mesh with their hopes and dreams.

It is our intention that corporations, civic organizations, schools, institutions of higher education and governmental organizations around the globe champion the notion of **Shaping Our Future**, by providing leadership in their communities that will help their young adults proactively embrace and engage in their futures in positive and constructive ways. As Alan Kay once said, The best way to predict the future is to invent it. By encouraging young people to ask **What kind of world do I want to create**? and giving them good tools and support to find their answers - we offer the next generation a real opportunity to lead.

Steve Hulbert,
Director
Foundation
for Our Future

Keith Wheeler,
Executive Director
Center for a Sustainable Future

Megan Camp,
Vice President and
Programs Director
Shelburne Farms

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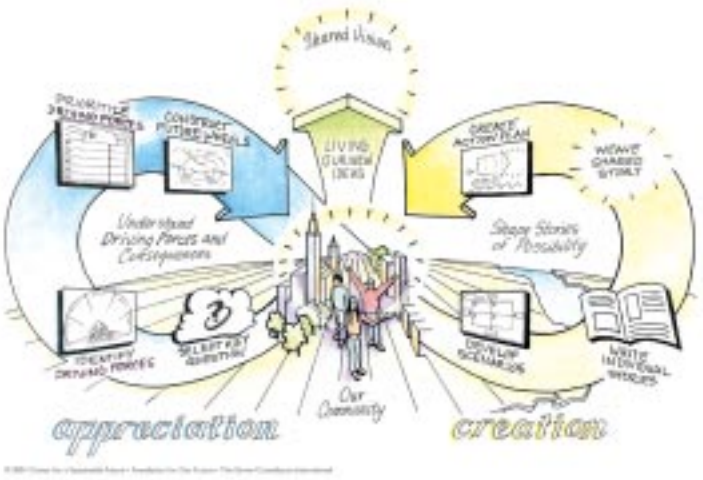
Shaping Our Future

1.1 What is a Shaping Our Future Youth Leadership Institute?

The purpose of doing a Shaping Our Future Youth Leadership Institute is to foster and catalyze leadership qualities in young adults that will engage them in shaping a future that is peaceful, just, and sustainable. Participants gain skills in understanding the complex systems that shape the world, learn to create new visions of the future by developing different scenarios about key issues, and learn how to use these skills to be leaders in shaping a sustainable future.

Possibility-Based Learning Process



1.2 Principles and Beliefs

- ~ Leaders of the future need to develop new vision, perspectives, strategies and stories based on their understanding of patterns in their world.
- ~ Empowering future visions in young people demands intellectual stimulation, diversity, dialogue, creativity, safety, and opportunities to explore subjects using all the human intelligences.
- ~ Young people are likely to act on their learning when they build strong connections between many ideas and events, when they can adequately reflect on their experiences, and when they engage in activities that integrate learning into everyday lives.
- ~ Young people need positive visions of the future to provide a hopeful context and perspective from which they can assess the violence, despair, cynicism, powerlessness and self-absorption often supplied by the news, music, movies, and other cultural sources.

1.3 Why Shaping Our Future Institutes Are Valuable

They provide people with:

- ~ skills and opportunities to shape their future through the creation of scenarios (stories) of the future.
- ~ multiple perspectives of the present and future through connections with other cultures and environments.
- ~ enhanced leadership and communication skills.
- ~ a network of adult and teen leaders with the skills to conduct their own Shaping Our Future institutes in varied geographic locations.

1.4 Why Study the Future?

It is important to study the future because it is the only timeframe we can influence. We can increase our ability to influence the future by learning about future possibilities. Future thinking:

- ~ provides us with the skills and perspectives to deal with complex thoughts and ideas.
- ~ strengthens creative problem solving and critical thinking skills.
- ~ helps us develop a keener sense of social responsibility.
- ~ reduces "Future Shock" by helping us learn to see change as the norm.
- ~ helps us learn to deal with long-range issues.

Benefits to Participants:

- ~ gain an increased sense of responsibility toward the future and future generations;
- ~ learn that we create the future by our individual and collective actions, choices and decisions;
- ~ learn how to actively shape our own futures;
- ~ learn to connect present choices and actions to future outcomes;
- ~ learn to view the world systemically;
- ~ learn to imagine and create possible, probable and preferred stories about alternative futures;
- ~ learn that we have influence over the future by identifying trends, analyzing their implications and discerning plausible alternative futures;
- ~ learn that many aspects of the future are knowable; and
- ~ learn to identify and analyze information with regard to its future significance.

Shaping Our Future, really helps extend their thinking beyond what they're going to have for lunch tomorrow or what they're going to do next week to think about the implications of the choices that they make today and help them see that they have choices but their choices have certain outcomes.

~ Keith

1.5 About Scenario Planning and Why We Use It

Scenario thinking and planning is a technique that was developed by corporate planners to help make better decisions. This is especially important when long-term, high stakes decisions are required. At the corporate level, for example, an oil company might be trying to decide whether to spend (or borrow) hundreds of millions of dollars to develop a new oil field or to invest in the development of new energy sources like hydrogen fuel cell technology. But the future is uncertain: What if a major car company introduces a fuel cell car that consumers love and gasoline powered vehicles become antiques? Or, what if consumers reject the new technology because it is perceived as unsafe? What eventually happens matters a lot. It could make that big investment extremely profitable, or turn into a huge debt putting the company's survival at risk.

At the personal level, you may be trying to decide what career path to follow – one that you will enjoy and that will provide you with enough income to live the kind of life you want. This decision will determine how you spend many years of your adult life. Should you take over your family's grocery store business or become a computer programmer? It's an important decision because you will be investing a considerable amount of time and money to develop that future outcome.

Whether you are a large corporation or an individual, in order to choose wisely it would be better to have a strategy that would work well in more than one possible future. That is what scenario planning is for.

Scenario thinking and planning recognizes that while we can foresee possible outcomes for things that matter to us, we cannot predict exactly what will happen, only what might happen. Scenario thinking and planning helps us better imagine and sort through the ways the future could unfold. Having refined, multiple perspectives of the future puts us in a better position to interpret current events and better gauge where they could be leading us. They form the basis for developing strategies that will serve us well across several possible future outcomes.

Since the technique has worked well for companies dealing with these kinds of difficult challenges, we decided to adapt it for use by individuals and smaller organizations so that they could put this valuable tool to work for themselves. We first adapted the technique for middle and high school teachers to use with their students. Then, through a series of pilot programs with teenagers involved in youth leadership programs in Georgia, Massachusetts, Vermont, Tennessee and Zimbabwe, Africa, we developed the process and materials in this guidebook to help program leaders and teachers use the technique more effectively with the young people with whom they work.

1.6 Who Is This Guidebook for?

This Guidebook is for high school teachers, youth program leaders, college faculty, and others interested in leadership development who want to learn how to facilitate a Shaping Our Future Leadership Institute. It is designed as a series of steps for creating scenarios of the future in response to a question or issue that is of interest to our students.

The Guidebook is for facilitators who are working with young adults in the general age range of 15 to 24 years old. However, the process and outcomes are suitable for adults of any age.

Meeting Curriculum Standards

In the process of conducting an Institute participants will gain knowledge and skills that satisfy certain curriculum standards. Some of the more common ones include:

- proposing alternative solutions to problems;
- identifying consequences of alternatives;
- distinguishing between fact and opinion;
- making generalizations and drawing conclusions;
- recognizing bias and stereotypes;
- viewing problems or situations from multiple perspectives;
- recognizing relevance of data;
- using technology to gather and analyze information in the problem solving process;
- communicating and collaborating with others in the problem solving process;
- making predictions and comparisons based on factual information;
- collecting evidence using appropriate; reliable data; and
- choosing a reasonable solution from among various alternatives.

1.7 Time Frame and Considerations for Facilitating an Institute

The guidebook is designed to provide a series of step-by-step activities that can be done in time frames of one hour or less. This is done to make it easier for teachers to integrate the Shaping Our Future process into their classroom schedules.

The process works well for a group size of 12 to 30 people. If only one facilitator is available and the group is on the large end of the scale, you may want to ask another person to help out. If you are going solo the work is more challenging when the participants are working in small groups (usually four subgroups). In that event you could ask that each small group designate a timekeeper, a recorder to keep notes and to fill in the templates and newsprint paper, and someone to help move the process along. These jobs could rotate among members of the small group so that each person has an opportunity to develop new skills.

The entire process should take about 24 hours to complete, i.e., to get to the point where the group has created four scenarios of the future, several newspaper stories about each future, and has developed an action plan to do something that will move toward a preferred future.

Facilitators can adapt the process to fit into two or three intensive days, or spread it out over weeks depending on the schedule you work with.

Shaping Our Future - The Process

2.1 What Do Scenarios Look Like? What Are We Creating?

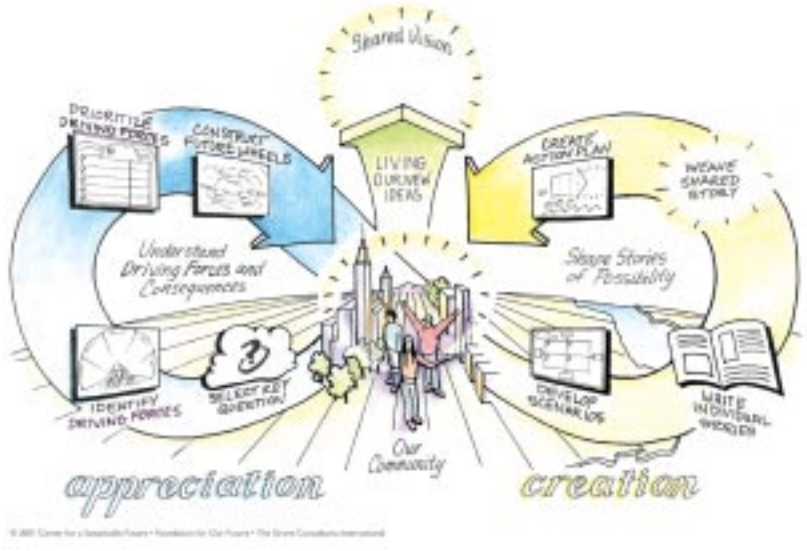
Creating future scenarios in response to a particular question or issue can help us better understand the present and consider possible actions we can take to create a better future. It is a methodical way of thinking about the unthinkable based on a few key uncertainties that are decided on in the process.

Scenario creation starts with a key question that is important to the participants. Good scenario questions don't have yes or no answers. They don't prompt an immediate answer but rather require reflection and deeper consideration. Some examples:

- What kind of a career would assure me high employment probability, provide an adequate income for myself and make me happy?
- What decisions can I make that will create a better quality of life for me, my family, or my community in the next twenty years?
- How could the internet change the way people interact with each other: between family, friends, strangers, nations, and cultures?

Once we've decided the key question we go through a process that results in four different ways the future might turn out. Those four scenarios are based on two critical uncertainties that we choose as the most important with respect to our key question. Because they are uncertain they could go one way or the other. So, each uncertainty has two endpoints for a total of four possible outcomes. By pairing up each of the endpoints we define four scenarios.

Possibility-Based Learning Process



For example, let's say that our question is "What will the role of a teacher be ten years from now?" And let's say that the most important uncertainties that we come up with are: a) who has control of the curriculum (teachers or administrators and parents); and b) what is expected of students (knowing the answer or asking better questions and pursuing them). Our four scenarios would then be about:

i. a future where teachers are in control of the curriculum and students are expected to know the answers;

ii. a future where teachers are in control of the curriculum and students are expected to ask better questions and pursue them;

iii. a future where administrators and parents are in control of the curriculum and students are expected to know the answers; and

iv. a future where administrators and parents control the curriculum and students are expected to ask better questions and pursue them.

These four scenarios are the starting points for stories that we develop which describe what these four futures could be like. In doing so, we would work into the stories a lot of the ideas and information that we developed earlier in the process: attitudes about learning and teaching, pay levels, accountability,

parental involvement, respect for the profession of teaching, influence of corporate executives on the nature of education and on and on.

The act of creating scenarios strengthens our ability to see how current events, actions, and decisions may cause one or another possible future to come true. This is a very useful tool in sorting through the deluge of information that we receive daily. Being able to critically analyze current trends in light of multiple futures empowers us to better choose specific actions and avoid pitfalls in achieving a desired future outcome.

We can use our scenarios to help interpret current events, actions, and decisions and better gauge where the present is going with respect to the four future scenarios that we developed. This gives us a better tool for culling out of the abundance of information available to us each day that information which is of most use. Our scenarios give us a tool to detect "weak signals" about changes that we might otherwise have overlooked. They also provide a language we can use to talk about what's going on in terms of issues that are important to the group.

2.2 Shaping Our Future - Overview of the Process

The process for developing scenarios is shown in the figure below.

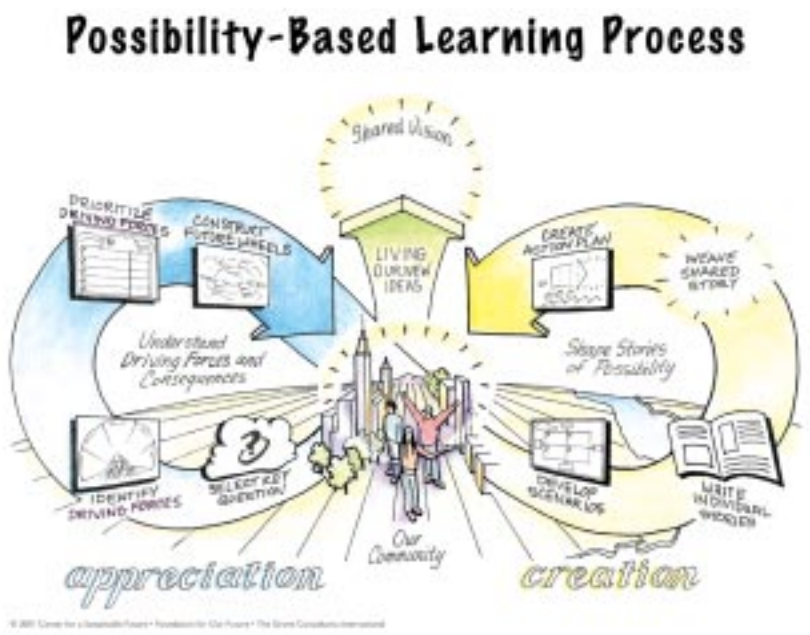
The Shaping Our Future process encompasses two cycles of development: Appreciation and Creation. The steps for the Appreciation phase are:

- Prepare to Work Together
  - ~ Review information about issues affecting the future
  - ~ Review process tools for facilitators
  - ~ Do the concentric circles activity
  - ~ Do the ROPES activity
- Develop Key Question and Subquestions
  - ~ Go deeper with the questions
  - ~ Reflect on the key question
- Identify Driving Forces
  - ~ Scan for driving forces
  - ~ Sort driving forces into categories of certain or uncertain and rank their relative Importance
- Construct Future Wheels

During the Appreciation phase we also develop a strong working relationship with our team (whether that is a classroom of students, or a group of people who have come together for the first time to explore the future from a common interest)

In the Creation phase we create the space and structure to develop plausible scenario stories that are robust and that paint vivid pictures of what certain futures would look like. These stories form the basis for sharing what the future could be and set the stage for an action plan that we will develop to move toward a preferred future. The steps of this phase are:

- Develop Scenarios
- Write Individual Stories
- Weave Shared Story
- Create an Action Plan and Work On It
- Celebrate Our Accomplishments
- Share Our Work with Other Shaping Our Future Groups



Prepare to Work Together

3.1 Review Sources of Information about Issues Affecting the Future

You are probably already familiar with a variety of sources of information that address issues affecting the future: newspapers, magazines, TV news and special reports, books, conversations with experts, movies, your life experiences and education. All these sources are useful and you will probably draw on them as you facilitate the process. The box provides a few websites that might be useful. These can be shared with the participants during the scanning activity later on in the process. We recommend that you visit these sites ahead of time and decide which you want to use with the group you are facilitating. You may want to print out and copy materials to handout later in the process.

Websites With Useful Resources for Scenario Creating

- World Bank Website for Schools
  http://www.worldbank.org/html/schools/
- Which World? Global Scenarios for the 21st Century
  by Allen Hammond
  http://mars3.gps.caltech.edu/whichworld//explore/scenarios.html
- CIA Global Trends website at:
  http://www.cia.gov/cia/publications/globaltrends2015
- Creating Preferred Futures - See the resources page in particular
  http://www.cpfonline.org
- Jim Dator's list of classic futures books.
  http://www.wolfson.ox.ac.uk/~wendy/resources/jimclassics.html
- Hawaii Research Center for Futures Studies
  http://www.futures.hawaii.edu/
- Driving Forces- links to lists of driving forces from the following people and sources. Allen Tough,Ken Hunter,Clive Simonds, Seven Tomorrows, John Naisbitt, Bob Theobald,Michael Marien, Future Survey Regent's Task Force, Joe Coates, Roger Caldwell, Christian Science Monitor:
  http://ag.arizona.edu/futures/fut/datdf01.html
- Anticipating the Future: a course on methods and approaches for studying the future at the University of Arizona
  http://ag.arizona.edu/futures/
- Good source of driving forces which you can use later (see section 5):
  http://ag.arizona.edu/futures/era/dfmain.html
- Understanding USA – lots of interesting visual data summaries about many aspects of life in America.
  http://www.understandingusa.com/
- Chronicle of the Future – Tomorrow's news today: a path from the already familiar landscape of life in 2000 through to the uncharted territories of 2050. Your guides are scientists and experts whose ground-breaking work is already creating the new millennium.
  http://www.chronicle-future.co.uk/chron-content.html and
  http://www.chronicle-future.co.uk/biographies.html
- The Wall Street Journal Millennium Edition The Next 1000 Years.
  http://interactive.wsj.com/millennium/millennium.html

3.2 Review Process Tools for Facilitators

Appendix A provides several facilitation techniques that are useful to beginning facilitators. Read through them to become familiar with what they are, when to use them, and how they work.

3.3 Do the Concentric Circles Activity
(adapted with permission from Anti-Defamation League's "World of Difference")

Purpose: Ultimately the work we do is about individuals living in a society with others. We will be thinking about the future and the world, but that means nothing unless we acknowledge our roles as individuals. The work asks that we each consider who we are and what we want out of life. In addition, the work only becomes fruitful when we can share these individual ideas and outlooks with the group. This will require listening and reflecting. This activity is to help the group warm up in these two areas.

Time needed: 30 minutes.

Materials needed: a watch to keep time.

Learning outcomes:

- develop confidence in expressing our thoughts and feelings about different topics;
- sharpen our ability to listen to others; and
- begin to develop a spirit of cooperation and learning with each other.

Learning objectives:

- gain a better sense of who we are as a group;
- learn what is important to each other; and
- practice listening to each other and articulate individual thoughts and feelings more clearly.

How to:

1. Provide participants with a brief summary of the rationale and challenges behind the scenario process upon which they are embarking. Tell them that this activity is to help them get to know each other a little better.
2. Have participants count off by two's (one, two, one, two,…). Ask them to form two concentric circles facing each other - with all the ones in the inner circle facing out and the twos in the outer circle facing in. Tell them that the people in the inner circle will be first to respond to a question. The person facing them in the outer circle will listen and not interrupt as their partner responds to the question. Then the other person will respond to the same question while the other listens. Allow 30 seconds to one minute per individual response; one to two minutes per question.
3. After each pair has responded and listened, have the people in the inner ring move one person to the left. Now ask the person in the inner circle to respond to the second question in the list below allowing 30 seconds to one minutes for a response. Stop the conversation and ask the persons in the outer circle to respond while their partner listens. Repeat the respond-listen, switch, respond-listen procedure for each of the questions below, or as many as can be done in 10 minutes:
    a. Tell something about you and your first, middle or last name.
    b. What is your favorite holiday and why?
    c. What would people be surprised to know about you?
    d. Talk about one person who has made a difference in your life. Why was this person so influential?
    e. Tell about a time when you had a positive influence on someone in your life.
    f. Tell about a time when you might have made a difference but chose not to.
    g. What is one accomplishment in your life of which you are proud? Explain what made this so satisfying.
    h. What is one thing you wish you could change about society?

5. Reassemble the group and discuss the following questions:

   - How did you feel answering these questions?
   - Were some questions easier to answer than others? Why?
   - At what points did you feel the most listened to? How could you tell?

3.4 Do the ROPES Activity

(adapted with permission from "Anti-Defamation League's World of Difference")

Purpose: Ropes can help us form bonds with each other and strengthen the work we will be doing together. As a group we can define the rules by which we will guide ourselves and the kinds of qualities we want our interactions to have.

Time needed: 30 min.

Materials needed: newsprint paper, markers, tape.

Learning Outcomes:

~ define a set of characteristics and rules to guide our interaction over the course of doing the Shaping Our Future institute.

Learning Objectives:

~ develop the ability to work cooperatively and agree on the rules that will govern the interaction between us.

How to:

1. Have the participants count off by fives. Tell them that the ones will take the letter R, twos will take letter O, threes P, fours E, fives S.
2. Tell them that in each of their small groups they will brainstorm words and phrases that begin with their letter. The words and phrases should be about the rules and qualities that we want each other to follow and achieve during our experiences together at the Institute. Each group should record their phrases on a large piece of newsprint paper with a description of what each phrase or word looks like in action. One person in the group should write them down as they agree on them.
3. Have the small groups work together for 10 minutes.
4. Have the small groups come back together as a large group. Starting with the R's have each group share their words and phrases with the entire group. Put the newsprint paper for each group up on the wall to serve as a reminder as the Institute proceeds.

ROPES example from a Shaping Our Future Institute

R

respect	– treat others the way you want to be treated
responsibility	– responsible for your own actions
revelations	– seeing the future

O

organization	– be ready for whatever you plan to do
outspoken	– don't be afraid to speak out
outgoing	– do more than you are expected
opportunity	– give everyone the opportunity to speak

P

polite	– while someone else talks, listen
potential	– don't give up, don't be afraid
prosperity	– come out better than where you started from

E

excitement	– enthusiasm
express	– open minded
excellence	– being superb, striving to improve ourselves
encouragement	– uplift your peers, teamwork, leadership

S

speaking	– communicating and group involvement
success	– accomplishing goals, completing assigned tasks
spirit	– encouraging, showing interest, participating and zestful attitude

Develop Key Question and Subquestions

4.1 Select Key Question and Subquestions

Purpose: To select the key question and subquestions that the group's scenarios will address. Note: You can skip this step if you already have a key question. Check to see make sure it is a good question (see Box). Or, you may want to use a more general question such as the following one which works well for a group of people who do not have a previous association and will go their separate ways after the process is completed:

What decisions can I make that will bring a better quality of life to me, my family and my community in the next twenty years?

Time needed: 30 minutes.

Materials needed: One wall-sized Key Questions Template (see Appendix B) for each small group and one wall-sized Key Questions Template to summarize the small groups' results, masking tape, markers, paper, pens.

Learning outcomes:

~ gain skill in working as team members and increase our ability to formulate questions that are challenging and engaging.

Learning objectives:

~ improve inquiry skills;

~ promote collaborative learning; and

~ increase our ability to assume and carry out different roles in accomplishing a task.

How to:

1. Instruct students to think about what is important to them personally and to the community they live in. If you are working with the group as part of an ongoing program, you could ask them to think about the organization's purpose or mission and why they are part of the program.

   Tell them that as a group they need to decide what key question their scenarios will address. Review the characteristics of a good scenario question (see box on next page). Give them a few minutes to write down some initial questions.

2. Form three or four small groups. Ask each group to select a person to record and one or two to report for the group when the small groups reconvene. Give each group a Key Questions Template on which they will record their questions. Allow 10 minutes for the group to brainstorm questions and get them on their templates.

3. Reassemble the small groups and ask each to share the key questions they brainstormed. On a blank Key Questions template summarize the results of each group as they report out. Group them into categories of similarity. See below for an example of a completed Key Question template.

4. Give everyone a few minutes to look over the summary sheet. Try to suggest a question that encompasses the span of what is there. If you have trouble trying to capture it in a way that seems to create consensus you could have the group vote.

5. If voting is necessary, tell the group that they each can vote for their two most favorite questions. Have each person place a check mark or some other symbol next to his or her two choices on the summary template. Tally up the votes and see which question is the top choice. Check to see if it makes a good question. If not, try to rephrase it in a way that is consistent with the characteristics of good scenario questions (see box).

Important: Tell students that voting does not mean that the other questions are to be discarded and forgotten. They are important and valid and should also be kept in mind throughout the process. Keep the template up for future reference.

Good Scenario questions:

- don't have yes or no answers.
- don't prompt an immediate answer.
- do require reflection and deeper consideration.
- do have a long-term timeframe.
- are about something that has not yet occurred.
- are about a topic or issue that the group is passionate about.

Before I did this, mostly I just thought about as far as my college major, that's probably as far as I've gone. We started talking about family, I never really thought about family before, I never thought past 2005.

~ Shawn

Key Questions

THEME

Decisions, Decisions

What kind of morals and character will people have?

- How to live lightly on earth?
- How to be an informed and responsible voters?
- What kind of entertainment choices/TV watching?
- Who to trust for help?

• What decisions can I make that will bring a better quality of life to me, my family and my community in the next twenty years?

• EDUCATION and CAREER

- Do I graduate from high school and go to college?
- What's my potential for earning money or promotions?
- What kind of work will make me happy and proud?
- What kind of people do I want to work with?
- What capabilities/skills do I want to have?

• FAMILY and FRIENDS:

- Do I go with or against family wishes?
- Should I relocate or stay in my community?
- What type of community to live in?
- How to play together?
- How to keep focused and finish what I start?
- How to consume less and save more?
- How can we create safer communities?

• KEEPING HEALTHY (physically and mentally)

- What will stress us?
- What beliefs, values, religion could I practice?
- What kind of health habits: food, drugs, smoking, exercise?
- How to handle relationships with parents and friends
- What rules to follow or not?
- Differences between outward appearance and inner character?

4.2 Go Deeper with Your Key Question - Flashcard Thinking

Purpose: Use this activity to get students to delve more deeply into the questions they have posed for scenario development. Flashcard thinking is a structured creative problem solving process. It stimulates critical thinking, idea finding, and idea capturing. Use this process to help students refine their key questions and subquestions for their scenarios. Note: this step can be skipped if the group is satisfied with their key question and time is limited.

Time Needed: 30 minutes.

Materials Needed: 3 x 5 notecards, writing implements.

Learning Outcomes:

~ demonstrate the ability to think critically, analyze a problem, and generate creative, supportive arguments for both sides of a complex issue.

Learning Objectives:

~ evaluate and select an appropriate issue or question for a scenario construction activity.

How To :

Flashcard Thinking is a brainstorming activity that uses a specific set of questions to stimulate critical thinking about a topic or issue. This is a very fast activity. Students should be given 45 seconds to record their answers to each of the questions. A sense of urgency is an essential element of this process

1. Start with the top three or four questions from the list developed in the previous step. Give each student five 3x5 cards for each question they will work on.
2. Have students write key words or phrases describing the question in the upper right-hand corner of a 3x5 card. Students record their answers on the 3x5 cards. The teacher writes the first issue on the board. The teacher asks the students the following series of questions. Allow only 45 seconds for students to record their answers and then move on to the next question. Repeat this process for each issue.

Questions:

What is **important** about this issue?

What is **uncertain** about this issue?

What is **certain** about this issue?

What **challenges** does the issue present?

What **opportunities** does the issue present?

Sample Flashcard

Will there be enough fresh water?

important: all life depends on availability of fresh water

uncertain: could cause conflicts among peoples and nations

certain: a necessity of life

challenges: limited supply/increasing demand by growing population

opportunities: water conservation technology and education

3. Once the flashcard thinking process has been completed, have the students review all of their flashcards. They may pair and share their answers, discuss them in teams, individually or as a whole class. When discussion/reflection time is completed the students will select the issue or question around which they will develop their scenarios. You may want to use the Nominal Group Technique to select the question the group will focus on.

4.3 Reflect on the Key Question

Purpose: This activity is used to help students personalize the key question and to identify ways that it is important to them individually.

Time needed: 10 minutes.

Materials: index cards or note paper, tape, pens.

Learning Outcomes:

~ develop the ability to see how an issue is relevant to the future.

Learning Objectives:

~ analyze a question or issue for its consequences; and

~ view an issue or question from the perspectives of others.

How to:

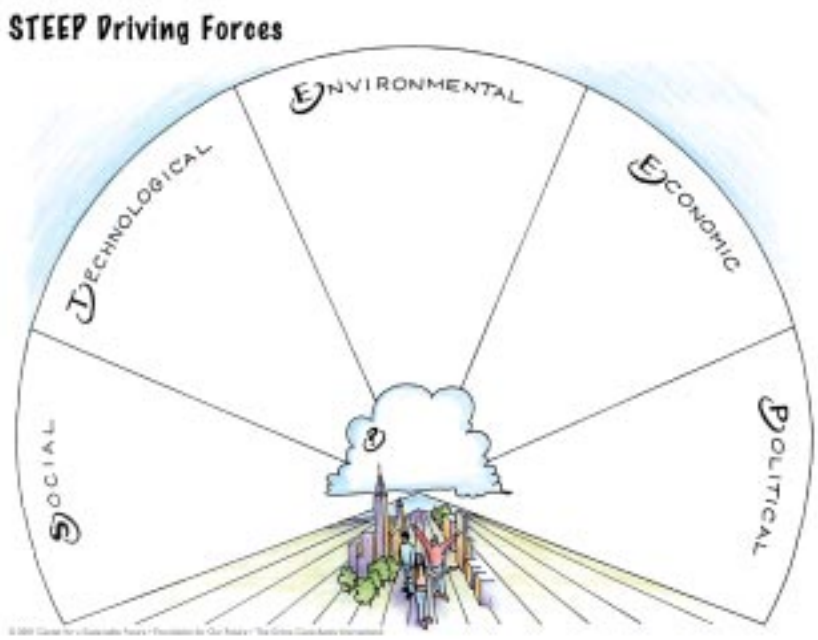
1. Pass out one 3x5 index card to each student and ask him or her to write the key question at the top.
2. Ask each student to quietly reflect on the question about why it is important to his or her own future.
3. Have each student post their responses on the wall and take time to read each other's responses. As a group discuss:
    - How are responses similar?
    - How do they differ?
    - What seem to be the things that are of most interest to the group as a whole?
4. Ask students to keep their cards available for future use. You may want to keep them posted for the duration of the process so that students can refer to them from time to time.

Identify and Organize Driving Forces

What is good information about the future? Simply put, it is information that helps us improve our current performance so that we can achieve a better future. (Morrison, Renfro and Boucher, 1984)

5.1 Scan Sources of Information for Driving Forces

Purpose: This step in the process is a key one. It is where students will research a wide variety of sources and create a deeper base of knowledge about driving forces, issues, and events that affect the future. They will use this knowledge extensively in the remainder of the process.



Note: If you are doing the Shaping Our Future Institute within an existing curriculum (such as social studies or environmental science) and students have already researched a variety of topics and have a good base of knowledge you could skip this step. However, you may also want them to focus on topic areas that may not have been covered to broaden the range of information they have to work with.

Time needed: two hours (minimum) up to four hours, or more, if time permits.

Materials needed: For the two-hour version: current periodicals, newspapers, Internet sources, if available. You may want to have students bring in magazines, newspapers, and other print sources from home to build up a pool of sources they can share.

If you can devote more time to the scanning effort you should also use the school and/or local library, Internet, TV, Radio, videos, interviews or visits/presentations by people with expertise in areas of interest. Paper, pens.

If internet access is available, provide students with the list of websites in section 3.1. *(also see Box on Examples of Scanning Sources for other possibilities).*

Students will also need paper and notebooks or 3x5 cards to keep a "Scanning Journal"

Wall-sized STEEP Driving Forces Templates – one for each of the five small groups and one as a summary template to record the results for all groups (a total of six) *(see Appendix B).*

Learning outcomes:

- ~ acquire new research skills in trend identification, analysis and forecasting;
- ~ distinguish between fact and opinion by using a variety of sources to support or validate conclusions; and
- ~ enhance critical thinking skills through analyzing and evaluating information, describing relationships among data, and establishing a knowledge base within which we can imagine and experiment with futures-oriented perspectives.

Note: The "jigsaw" process in the how-to below is an effective way to involve students in a combination of cooperative learning and scanning for trends, events and emerging issues. Students simulate what trained futurists often do when scanning for relevant information and at the same time practice working as teams. (This activity is adapted from Spencer Kagan's design for "expert group jigsaw").

Learning objectives:

~ use data collection, selection and organization strategies to gather and sort both quantitative and qualitative data from multiple primary and secondary sources, and from a variety of media, including electronic media such as the Internet and CD ROM.

~ practice proper citation of sources of data;

~ interpret quantitative data such as that presented graphs, tables and charts;

~ understand and explain the differences among trends, events, and emerging issues; and

~ use the internet to gather and analyze information.

As teenagers I think we don't tend to understand all the things going on right now and we just tend to learn what they're giving us to learn. This project made us go over all this research and information that helped us in understanding life.

~ Felipe

How to:

1. Explain to students that the future doesn't arrive unannounced; advance signals of future consequences are being continually transmitted in the present. Scanning is their antenna for noticing and tuning into future possibilities. This powerful process tool involves four basic activities:
   - choosing the sources to scan,
   - scanning the sources for information,
   - determining what information is relevant to the scanning exercise, and
   - deciding how that information can be used.
2. Give students the handout: *Types of Information to Look for in Our Scanning*. Explain to them that they should read it and become familiar with the three types of information: Driving Forces, Events, and Emerging issues. Tell them that they will probably come across all three types of information as they scan and that they should pay attention to all three. However, it is the driving forces that they will be focusing on in the remainder of the process, so those are most important to look for.

   Also refer back to the key question and subquestions from the previous steps. Scanning should be aimed at addressing those questions.
3. Explain to students that they will be scanning in five teams, each with a focus area. Those areas are: Social, Technological, Environmental, Economic, and Political (STEEP). Tell students where the resources for the scanning can be located and how to access them. Also explain that each team will become experts in that area and share their knowledge with the other teams in a "jigsaw" process.
4. Tell students that they will be keeping scanning journals to record their scanning "hits". *(see Box on "Scan Hits" and the Scanning Journal).* Provide students with the example of a scanning journal entry *(see Box with a sample entry).*

Note: You may find that you need a STEEP scheme that is more customized to fit your specific content area or instructional goals. *(see Box on Examples of STEEP Sub-categories for more. In that case, you may want to add sub-categories).*

4. Divide up the class into five teams – one for Social, one for Technological, and so on, through the Environmental, Economic and Political categories. Although the facilitator/teacher may assign students to categories, our experience indicates that students increase their enthusiasm for futures thinking and scenario creating, and are more empowered in their learning, when they are permitted to self-select the areas they are most interested in. After the students have their STEEP categories picked out, the following sequence might be used:

5. *Teams Meet* – Social category students meet in one area, Technological category students gather in another area, Environmental in a third area, Economic in a fourth area, and Political topic selectors in the fifth space.

Note: if you have a differentiated classroom containing students of varying abilities, you may need to negotiate with students to ensure that there is a balance of achievement levels in each of the groups.

Note: Because the STEEP categories are so global, within these broad areas, Tell students that they should discuss how they can break down their broad interests into more specific topics (such as "condition of coral reefs" in the Environmental category), which will result in the teams further dividing into working groups of three, two, or even one student *(see box on Some Example of STEEP Categories)*. Therefore, two levels of "teachable moments" are produced: the interdependence among the five STEEP categories, and the relevance of topics within the different STEEP categories.

Whatever you see on the news it is now. Before I thought: well this is just what happened yesterday, but now it's more like: this is what happened yesterday and how is that going to affect us in future?

~ Knista

6. *Teams Consult* – Once the teams have been identified and topics within the STEEP Team members have been delineated, students can initiate their cooperative scanning activities. After the scanning is done the team should meet and share their findings. Have them record their driving forces on the STEEP template in the section that corresponds to their focus area.

7. *Teams Create and Practice a Plan for Sharing Scanning Results* – Teams and subgroups with the teams design and practice a plan for sharing the findings of their research (scanning) both within the team and with the other teams. In this way, the students become "experts" in their topic areas.

8. *Demonstration of Knowledge* – Students present their findings of driving forces in a presentation format – overheads, poster board, chart paper, PowerPoint or other presentation software or other media – to demonstrate their expertise derived from the scanning activity. This step of the jigsaw process not only reinforces the learning of the particular STEEP category team but also enriches the knowledge base of the other teams in the class.

9. *Record Driving Forces for each STEEP Area* - As each group presents their findings, record the driving forces that they identified on the STEEP Driving Forces Template. As you do this look for opportunities to combine and group driving forces to minimize the number of items on the list. Use this template for the Prioritizing step which follows.

Note: If time allows, you may want to have students delve deeper into their scanning hits *(see box on Questions for Extending the Learning value of the Scanning Activity)*.

See page 27 for example of completed STEEP summary template.

Examples of Scanning Sources			
PERIODICALS	WEBSITES	NEWSPAPERS	JOURNALS
American Demographics	BBC	International Herald Tribune	Future Survey
Discover	Census Bureau	New York Times	Futures
Economist	CNN	USA Today	Futures Research Quarterly
Fast Company	Creating Preferred Futures	Washington Post	New England Journal of Medicine
Fortune	Environmental News Network		Technology Horizons in Education
Futurist	Global Trends (U.N. Cyberschoolbus)		
New Scientist	Foundation for Our Future		
Newsweek	NASA		
Time	Wired News		
World Press Review	Worldwatch		

Handout for Students: Types of Information to Look for in Our Scanning

Driving Forces are descriptions of phenomena occurring in the community, nation, region and world that show movement (either increasing or decreasing) over time. Driving forces are never static. They are dynamic and should be expressed as such. People easily comprehend driving forces because such forces are often mentioned in media such as newspapers, news magazines, television and the Internet. Some examples of driving forces are:

- faster integration of new technologies into everyday life - and the workplace;
- increasing pressure on the Earth's life support systems;
- decreasing rainforests;
- heightened movement toward economic globalization.

Events are single, occurrences with far-ranging implications for the future in terms of public opinion and policy. Some examples of events with this sort of impact are: Presidential elections; the cloning of Dolly the sheep; and the passage of the North American Free Trade Agreement.

Emerging issues refer to subtle movements that most people haven't noticed yet. Often these changes have not made it to the mainstream press. Emerging issues are usually first revealed in professional trade journals, so-called "fringe" media and "alternative" publications, and by experts in the field. Here are some examples: in the 1960s organic health food was an emerging issue — now it is mainstream; in the 1970s personal computers represented an emerging issue — now PCs are mainstream; in the 1980s the democratization of authoritarian governments was an emerging issue — now democracy is the aspiration of nearly every nation in the world; in the 1990s biotechnology was an emerging issue — now it is a force increasingly to be reckoned with. Can you think of an example of an emerging issue in the year 2000 that is likely to become mainstream in another 5-10 years?

"Scan Hits" and the Scanning Journal

By keeping a "scanning journal," we are able to structure our research findings, maintain them in an orderly fashion and, therefore, are less likely to become lost in the process of divergent thinking promoted by scanning. A recommended method of starting and maintaining a scanning journal is to select several information sources including periodicals, web sites, newspapers and journals to monitor (or scan) on a regular basis – daily, weekly, monthly – then record in the journal notations of trends, events and emerging issues. Such information is known in the futurist profession as "scan hits".

Another benefit of scanning and the scanning journal is the practice we get in proper citations of our research. Whatever citation method the teacher is used, it is important to include at minimum the source and date of the "scan hit," the author/reporter of the item, a brief (2-3 sentences) summary of the finding, and a short description of its implications for the future. While the focus may be on one STEEP category and topic within that category, the learning process is enriched and extended by finding and recording items in all five STEEP categories. If the particular scan hit fits into more than one of the STEEP categories, note that on the journal page, as well. (**Note:** it can also be effective to relate the scan hit to our own life experiences; that is, consider the implications of the identified trend, event or emerging issue for the future in an objective sense, and how this hit affects you personally and your community?)

Sample Scanning Journal Entry

Title	SOURCE	SUMMARY	FUTURE IMPLICATION
Virtual Reality as a Means of Experiencing Nature	*Worldwatch* Sept/Oct 1996 by David Orr	We will be able to reinvent habitat and species using Virtual Reality (VR).	Will we still want to visit real places? Could VR cause us to value nature less? Could we see VR as better than the real thing?

Some Examples of STEEP Sub-categories:

SOCIAL	TECHNOLOGICAL	ENVIRONMENTAL	ECONOMIC	POLITICAL
Community	Biotechnology	Natural resources	Business	Governance
Education	Cloning Nanotechnology	Sustainability	Trade	Legislation
Culture	Computers	Climate	Work	Laws, rules and regulations
Values	Information	Land	Globalization	Democracy
Gender issues	Processing	Air	Multinationals	Authoritarianism
Race	Internet	Water	Collective Bargaining	Privacy
Lifestyles	Communications	Endangered	Taxes	Advocacy
Arts	Space	Species	Currency	
Health	Medicine	Energy sources	Work	
Spiritual	Robotics	Pollution	Volunteerism	
Demography	Transportation	Eco-Activism		
Children/Youth		Pesticide usage		
Peace/Conflict		Food		
Leisure /recreation		Carrying capacity		

Questions for Extending the Learning Value of the Scanning Activity

What are the basic causes of the driving force, event or emerging issue?

Are the causes likely to continue?

What could happen to alter the trend or emerging issue (obviously, a discrete event has already occurred and can't be altered)?

Are there any countervailing driving forces, events or emerging issues? If so, list them.

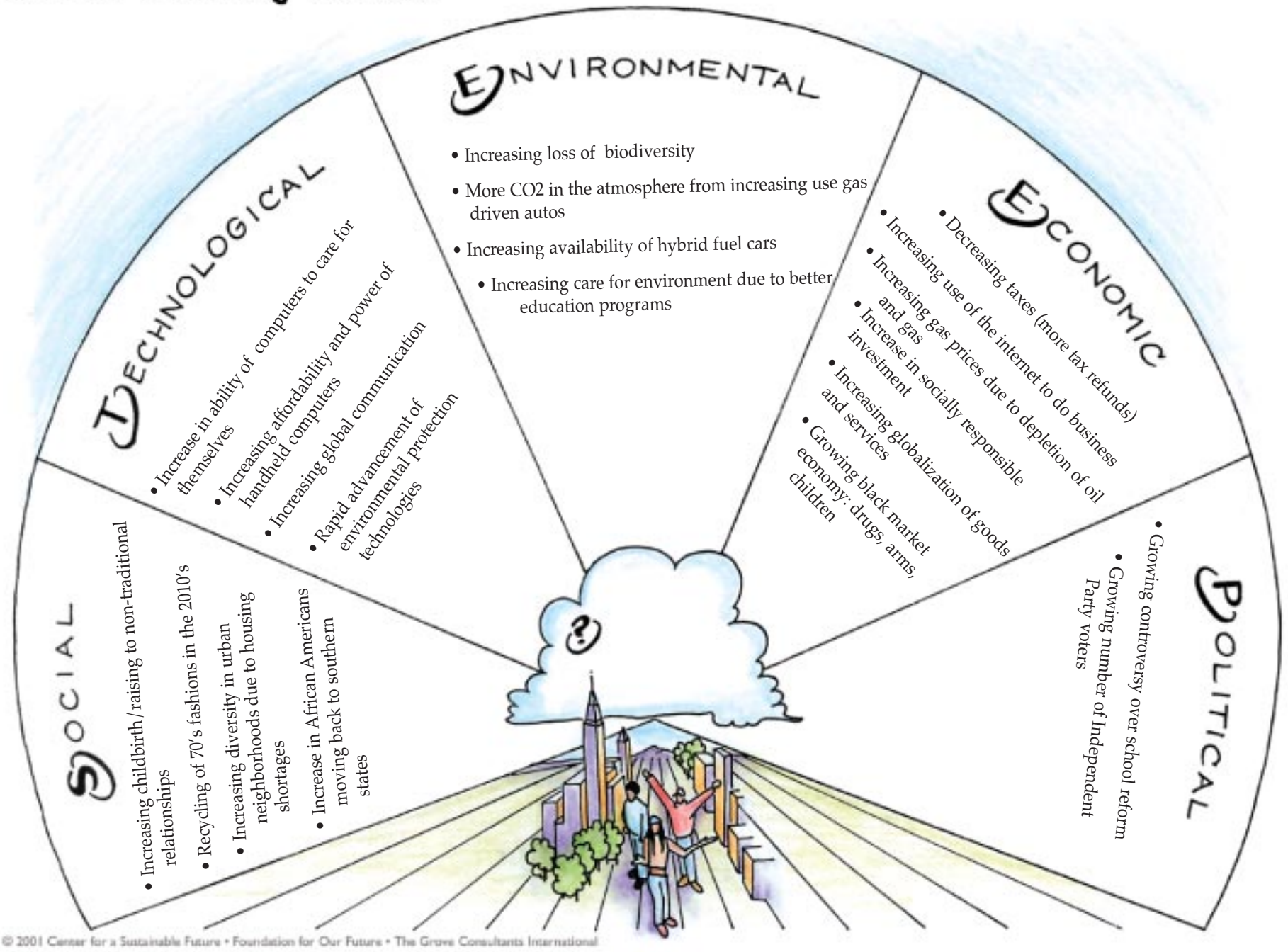
Specify the positive and negative consequences of the driving force, event or emerging issue.

What could be done to enhance the effects of the driving force, event or emerging issue?

What could be done to lessen the effects of the driving force, event or emerging issue?

(Adapted from *Enhancing Thinking and Creativity with Futures Studies*, Charles E. Whaley, 1995)

STEEP Driving Forces



5.2 Sort Driving Forces into Categories of Certain or Uncertain and Rank Their Relative Importance

Purpose: This activity is aimed at sorting the summary list of driving forces developed in the previous step into two categories: certain and uncertain. The uncertain driving forces will be used in the next step of the process to define the four scenario spaces about which students will explore and develop stories. The certain driving forces will also be used later on when students are developing their scenario stories. In this step students will also agree on what the most important certainties and uncertainties are.

Time needed: 45 minutes.

Materials needed: Wall-sized Summary STEEP Driving Forces Template from the previous step, Flipchart paper, Markers, Tape.

Learning Outcomes:

~ enhance our critical thinking skills through: analyzing and evaluating information, discerning relationships among data, and using opinions and beliefs to decide on the relative importance of data items.

Learning Objectives:

~ distinguish between fact and opinion;

~ synthesize data into categories of similarity and difference; and

~ make better generalizations and conclusions.

How To:

1. Tell students that they must decide if the driving forces on the summary list are likely to be certain or uncertain – in terms of how they will play out into the future.

   Certain means that the driving force will be just as prominent and will exert the same level of force as it does today. For example, if "growing world population" was one of the driving forces on the list, would that be true over the next twenty years? (According to recent population studies, the world's population will continue to grow over the next 30 to 50 years, so that would be a certainty).

   Uncertain means that it is a driving force that could change and either be more or less prominent and have more or less force depending on how it changes. For example, if an uncertainty was "increasing budgets for military needs", would that likely be true over the next twenty years? Looking at the past twenty years might show that the military budgets have gone up and down and so we would conclude that this driving force is uncertain.

   Uncertainties seem to be harder to decide on than certainties. This judgement can be a bit arbitrary if we are short on data. But it is more important to reach consensus based on the previous work and research done than to be exactly right. What we decide together is the important result.

2. Deciding on certainties and uncertainties can be done as a whole group. Use the summary STEEP Driving Forces Template generated previously. Tell the students that they will vote for each driving force listed on the summary template – whether it is a certainty or an uncertainty. To reduce the number of items on the list, we may again want to review the driving forces summary template and ask if any of them can be consolidated into a single category.

I'm glad that I did this because it helped me realize the importance of teamwork. We had a chance to learn about each other. We had an opportunity to take the leadership roles and just kind of get out there and show a lot of people that we can do most of the things that adults can do.

~ Nittaya

3. Emphasize that this activity is to help define what the group sees as certain and uncertain and that there are no right or wrong answers. Also instruct the group that they should constantly refer to the Key Question as a reference for whether an item is more certain or uncertain. Allow some time for discussion of the list or the definition of certainty and uncertainty if needed.

4. Have each person write on the summary template next to each Driving Force whether they think the item is certain or uncertain using a common code (e.g., "C" for certain, "U" for uncertain, or use red colored sticky dots for certain, green for uncertain….)

5. After everyone has voted, tabulate the results. Certainties are those items that have a majority of "C" votes. Uncertainties are those with more "U" votes. Items that are a tie become uncertainties.

6. Choose the Five Most Important Certainties - On a newsprint paper write up the list of certainties. Do the same on a separate newsprint for the uncertainties. Now ask students to decide on the five most important certainties: which five they believe are the most critical with regard to the Key Question the group is exploring.

   Tell each student to vote for his or her top five certainties. They cast five votes, one for each of their top five. They must cast one vote per item (i.e., they cannot put two or more votes on one item). After the voting is done tally up the results. The top five vote getters become the five most important certainties. Tie votes can be re-voted, or we can decide to include both in our list of most important certainties. We will use these certainties later on when we are developing our scenarios.

   Note: If you have a larger group of students (thirty or more) you may want to limit the number of votes that each student casts to three – in order to keep the total number of votes to be counted to a manageable number. (You would still choose the top five vote-getters).

Important: Tell students that voting does not mean that the other questions are to be discarded and forgotten. They are important and valid and should also be kept in mind throughout the process. Keep the template up for future reference.

7. Choose the Five Most Important Uncertainties - Now focus on the list of uncertainties sorted by STEEP categories. In this step students will decide on the most important uncertainty (with regard to the group's Key Question) in each of the STEEP categories. Use the same voting process as for deciding on the most important certainties. Have each student cast one vote for the most important uncertainty in each STEEP category. After the votes are placed, tally the results. The item in each category with the most votes is the most important uncertainty. Tie votes should be re-voted so that there is only one in each category.

We will use these top five STEEP uncertainties in the next activity to rank their relative degrees of uncertainty.

Note: Before voting on the uncertainties we may want to check them to be sure that the way they are worded does not suggest an outcome or a value. We will do that later.

For example, an uncertainty might be: "The degree to which people will embrace technology in their lives". That's a good description of an uncertainty. An example of how NOT to describe the uncertainty would be: "Whether people will reject technology". The difference here is that in the first example the outcome is not implied in the way the uncertainty is stated. In the second example the wording suggests that the uncertainty can be answered by a yes or a no.

This may seem a bit subtle, but the distinction is important. One test that students could apply to their uncertainties is to ask if the uncertainty as stated could be answered with a "yes" or a "no". If so, they should reword it so that the outcomes for the uncertainty are better described by adjectives or adverbs like "low" and "high", or "centralized" and "decentralized" or "strong"" and "weak" or "poor" and "excellent".

… when you see different people's viewpoints it tends to change your viewpoint also. I mean you might have a set mind that one thing can be only done one way but once you hear other people's opinions and views you tend to think about it a little bit and your views do change.

~ Amit

53 Decide on the Two Most Uncertain Uncertainties

Purpose: In this step students will discuss and decide on the relative importance of the five uncertainties they chose in the previous step. These will become the two uncertainties they will use to define the four scenario spaces for their future stories. They will use these two uncertainties to create Future Wheels in the next step (if time permits they will do Future Wheels for the other three uncertainties as well).

The Gauging Uncertainty template is a tool to help students decide which two of the five uncertainties are most critical to the Key Question they are exploring. Students will use the worksheet to guide their dialogue in small groups about the relative uncertainty of the five most important uncertainties.

We all have ideas about the future, it's not the same future but where we go will be the same place

~ Seyde

Time Needed: 45 minutes.

Materials Needed: Wall-sized Gauging Uncertainty Templates (Appendix B) – one for each small group, markers, masking tape, flipchart paper or newsprint paper.

Learning outcomes:

~ discuss our different perceptions of where an uncertainty lies on a scale of 1 to 10;

~ develop skills in articulating our rationale for conclusions; and

~ strengthen our ability to reach consensus around complex issues.

Learning objectives:

~ communicate and collaborate with others in the problem solving process;

~ propose alternative solutions to problems; and

~ view problems and issues from multiple perspectives.

How To:

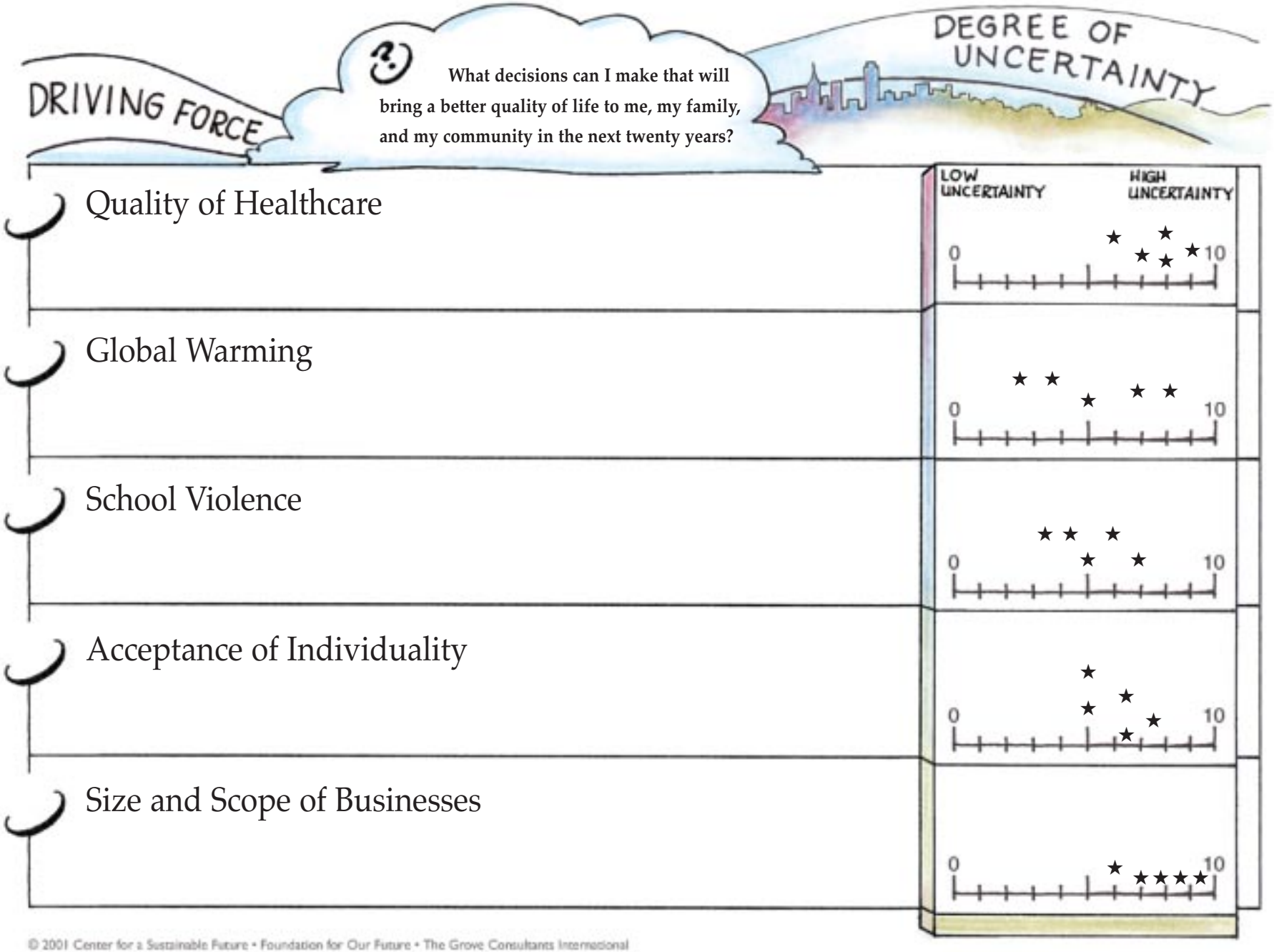
1. Explain to students that they will use the Gauging Uncertainty template in small groups to rank the level of uncertainty of the top five uncertainties. The groups will reconvene and share their results and a final consensus reached about the top two uncertainties.
2. Form three or four small groups and decide who will record, who will keep time, and who will present for the group. Give each group a template. Instruct each group to fill in each of the five spaces on the worksheet with the five most important uncertainties that they developed previously.
3. Explain that the students should review each of the uncertainties in their small groups and discuss how uncertain they think each is on a scale from 0 (least uncertain) to 10 (most uncertain). After discussion on each item, each student should vote on the degree of uncertainty for that item. Using the scale on the template each student should make a mark on the number they feel is representative of the degree of certainty for that item.

Students should then repeat this process for each of the other four items on the list.

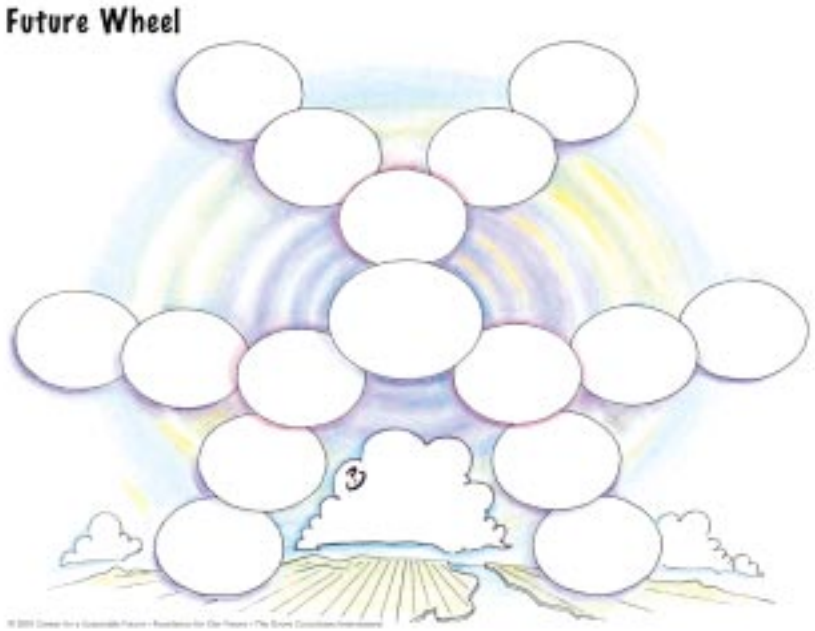
4. Break out into small groups and rank the uncertainties.
5. Reassemble the small groups and have each group share the results of their rankings with the whole group. Compile the results on a piece of newsprint showing the top two vote getters for each group.

Uncertainty	Group 1	Group 2	Group 3	Group 4
Driving Force A	x	x	x	x
Driving Force B				
Driving Force C		x	x	x
Driving Force D	x			
Driving Force E				

Gauging Uncertainty Worksheet



Construct Future Wheels



Purpose: The Future Wheel helps students understand forces and factors that are interacting with each other to influence the future. It graphically depicts a range of possible consequences likely to flow from a particular driving force. Exploring the potential future consequences of driving forces enables students to organize and synthesize their thinking concerning the future. A Future Wheel illustrates cause and effect relationships between a driving force and the changes that could ripple out from it.

Time needed: 60 minutes If time is short, limit the brainstorming of each set of consequences. If more time is available, allow the activity to continue until all ideas are expressed. Put extra 1st, 2nd and 3rd order consequences in a consequences bank for possible future use in the scenarios.

Materials needed: Future Wheel Templates *(see Appendix B)*, 4 different colors of post-it notes, markers, paper, pens.

Learning Outcomes:

~ synthesize a framework for comprehending the social and physical environment.

~ understand how apparently unrelated events are, in fact, connected and interdependent.

Learning Objectives:

~ analyze, interpret, and synthesize information obtained from multiple sources and communicate results in a unique way.

How to:

1. Use the Future Wheel Template to create future wheels for your scenarios. Show students the template. Explain that the wheel has a center circle where the uncertain driving force is entered. Around that circle are three more circles called first order consequences. Moving outward from the first order circles, there are two circles connected to each first order circles. These are for second order consequences. And the outermost ring of circles, connected to each second order implication, are the third order consequences.

2. Tell the students that they will work in five small groups, one for each of the uncertain driving forces that they developed earlier. Ask each group to decide on a recorder, a timekeeper and on who will report the group's results to the larger group.

   Each group will start with the most uncertain driving force in their STEEP category at the center with first, second, and third-order consequences radiating out from there. Show the example of a completed future wheel.

   Explain that they should try to think about these consequences as cause and effects that ripple outward - like the rippling rings that flow across the water when a pebble is dropped. They should focus on causality and not on chronology. Causality means that there is a clear cause and effect

relationship between consequences. For example, increasing taxes on business → more money available for school funding. Chronology may not describe causality. It tells about when something happened and then something else happened after that which may not necessarily have been caused by the first event. For example, increasing taxes on business → fewer small businesses. A better way to state this would be: increasing taxes on business → small businesses lobby for tax breaks.

Suggestion: Use different color post-it notes for the uncertainty, the first order consequences, the second order consequences, and the third order consequences. This makes a total of 4 colors. Using post-its makes it easier for the group to change the content of each circle in the Future Wheel as their ideas evolve.

3. Tell students to start by writing the top uncertainty from the STEEP category on a post-it note and place it in the center circle of the Future Wheel Template. Brainstorm first order consequences by asking the group members to call out the immediate results that are likely to flow from the driving force. As they call out the first order consequences write them on post-it notes and place them on the Future Wheel Template.
4. Brainstorm second order consequences by asking students to call out immediate results that are likely to flow from the first order consequences on their Future Wheel. Write two second order consequences for each first order consequence on post-it notes and place them on the appropriate circles on the Future Wheel Template.
5. Repeat the procedure by writing one third-order consequence for each second order consequence on post-it notes and placing them on the appropriate circles.

I like math and math takes a lot of steps and process, and when we worked in teams like we did with the Future Wheel and the flowchart thing we're doing now it makes you go beyond just the surface and just go deeper into different situations like I like doing.

~ Shawn

Note: be sure that students are developing consequences that are well rounded. If it appears that the consequences are predominantly negative (as is often the case) or positive, we may want to apply the PMI technique to the items being brainstormed (*see Process Tools for Facilitators in Appendix A*).

6. Students should review the completed Future Wheel and discuss any final changes they think should be made before presenting to the whole group.

Reassemble the groups and have each group share their Future Wheels with each other. After each group presents have them place their completed template on the wall. Be sure each Wheel is labeled with the STEEP category it represents. Give students a few minutes to review the completed templates. They will use the Future Wheels to help develop the content of their four future scenarios in the next step.

Some questions we might pose to students to generate ideas for consequences.

How would the driving force affect:

- ~ what a person would aspire to?
- ~ what conflicts would be like?
- ~ what would peace be like?
- ~ how a person would view and express love?
- ~ how a person would view family?
- ~ how a person would view marriage?
- ~ how a person would view spirituality?
- ~ how people would communicate?
- ~ what people would value?

I've seen quite a few ah-ha's!... But I've also seen just a general maturing of the class and beginning to look at life in an adult sense. It's almost like I walked into the room with 23 teenagers yesterday morning and now I feel like we're dealing with 23 young adults.

~ Donna

...I think that this experience has helped me personally because when I think about other people that didn't have this experience they don't think like us, you know, now we're exposed and we know how to look at things a little differently.

~ Sophea

...as 18 year olds they're having to think about the future and I don't think that that's something they traditionally do in the sense that it's this organized, that there are people who have been trained to help students pull out of themselves what they think the future is. It looks like they're on track.

~ Sammy

Future Wheel

Example of Completed Future Wheel

Develop Scenarios

Purpose: In this step we will use the two most important uncertainties that we chose in section 5.3 as the two axes of a matrix to form four scenario spaces. In these spaces we begin to define what the future in each of those scenarios could be like.

Time needed: 60 minutes.

Materials Needed: Wall-sized Four Futures Templates (Appendix B), paper, pens.

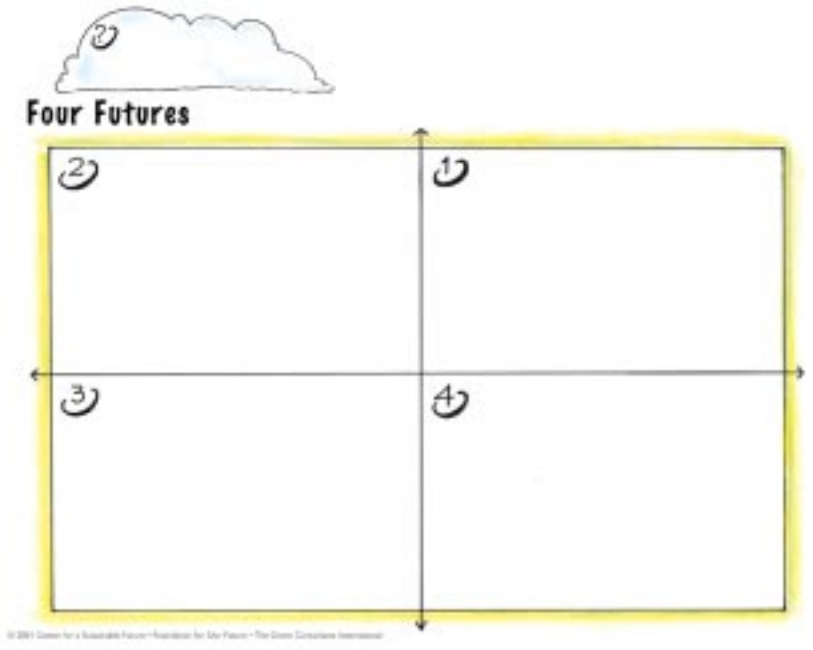
Learning Outcomes:

- ~ strengthen our ability to analyze and simplify a complex set of variables into interrelated components; and
- ~ improve our skills in working collaboratively to create a group product.

Learning Objectives:

- ~ identify consequences of the alternatives;
- ~ distinguish between fact and opinion;
- ~ make generalizations and draw conclusions; and
- ~ view problems or situations from multiple perspectives.

> ***...we got to run with it and come up with our own ideas and come up with basically the whole project by ourselves. It makes me feel more independent, being able to work on a big project like this and being able to get it accomplished.***
>
> ~ Wais



How To:

1. Explain to the students that they will be using the Four Futures Template to sketch out the four futures that they will explore and write stories about. This template is developed using the two most important uncertainties they decided on earlier.
2. Work with the whole group to decide how to label the horizontal and vertical axes of the Four Futures Template.

   For example, let's say the two most important uncertainties we decided on were:

   a. how readily people accept technological changes and innovations; and

   b. whether big, global companies will dominate the business sector.

   Label one of the axes with the first uncertainty, something like "acceptance of technology". Label the other axis with uncertainty, something like "corporate landscape". It's important here to avoid choosing words that describe a direction or value for those uncertainties. We will do that next. *(see the discussion about wording the uncertainties in section 5.3).*

3. Now that we have named the uncertainties, we need to decide how to label the extreme ends of each of the axes. The goal here is to come up with labels that describe what the group imagines the extreme but possible endpoints of the uncertainty could be.

   Through discussion as a group we might decide that the two most extreme, and possible, ends of the acceptance of technology axis are: "quick to embrace" and "cautious scrutiny". For the corporate landscape axis we might decide that the endpoints are "the big and the few" and, on the other end, "the small and many".

   By labeling the endpoints of our two axes of uncertainty, we have defined four scenarios of the future with respect to the question we are exploring. In our example, we would now have the following four scenarios of the future:

   i. a future when the businesses are big and few and people are quick to embrace technological innovations;

   ii. a future when businesses are small and many and people are quick to embrace technological innovations;

   iii. a future when the businesses are big and few and there is cautious scrutiny of technological innovations;

   iv. a future when businesses are small and many and there is cautious scrutiny of technological innovations.

I think it's been an eye opening experience. If nothing else they've spent two days realizing that we're all connected, whether we're talking about global warming and the decisions we make with that issue or if we're talking about violence in schools.

~ Donna

4. At this point, assign a group to work on each of the four scenarios. Each group will be responsible for exploring their scenario and developing stories that tell something about what life would be like if that future were to become real.

5. Advise students to review the Future Wheels and their lists of certainties and uncertainties for topics that they can include in their scenario. In their groups they will discuss what the positive and negative possibilities of their scenario could be. Emphasize that they should not assume that one scenario is more negative or positive than another. Each future has its own "good-bad-ugly" aspects. What will distinguish them is how students imagine the driving forces to play out in their future.

   Option: If you think that students would benefit, you might want to do the Visioning Activity in the Appendix. It is designed to stimulate their imaginations and to get them more into a "future perspective". We all have a strong tendency to recast the present in describing the future. Taking an imaginative leap forward ten, twenty, or more years is a challenge and the visioning activity may help. Note: If you choose to do the Visioning Activity, each scenario group should do their own visioning for their particular scenario.

6. Tell students to break into their small groups to do the following tasks:

   - Revisit their Future Wheels and critical uncertainties and look for connections among the implications as they relate to their specific story quadrant; and

   Somehow address the top 3 certainties (from the earlier list of certain driving forces) in their story quadrant; and

   - Come up with a title for their future scenario.

   Note: You might consider giving students some questions they can use to help explore their scenario *(see box for suggestions)*.

7. After the groups have had enough time to complete their tasks, have them come back together to share the results of their efforts. See the example of a partially completed template below. As each group presents, use a blank Four Futures Template and write the contents of each group's scenario ideas and titles in each quadrant.

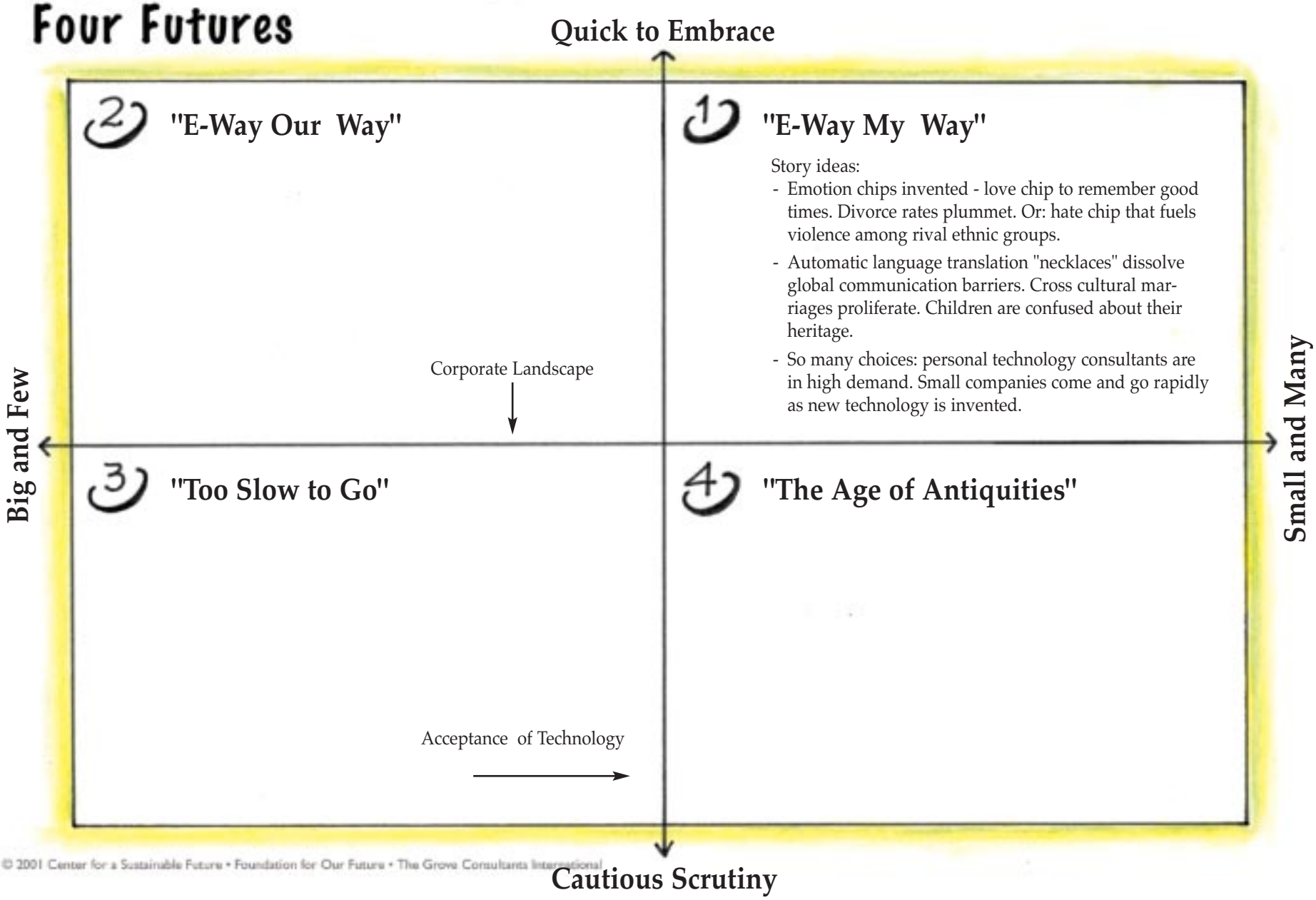
...when you think about the quality of life you know what you want and you know what direction you want to go in and you think about those decisions much more carefully and what direction you have to take and what kinds of decisions you have to make.

~ Knista

Questions students could explore about their future scenario:

- ~ How do the implications and uncertainties play out in your story quadrant?
- ~ Describe how your story gets from here to there.
- ~ What events took place to make the end points of your story plausible?
- ~ How would a hero succeed in your future? What would his journey look like?
- ~ How would the haves and have-nots handle the driving forces in your future?
- ~ What challenges would be present in your future?
- ~ What threats and opportunities would your characters face in your future?
- ~ If you were to live in this future what would a day in your life be like? Describe it.

• What decisions can I make that will bring a better quality of life to me, my family and my community in the next twenty years?



Write and Weave Stories Describing Future Scenarios

8.1 The Future Times Newspaper Template

Purpose: To take the ideas and storylines created in the previous step and work them into a series of stories that appear on the front page of the newspaper on a date many years into the future (use the date chosen at the beginning of the process).

Materials needed: Future Times Newspaper Templates (Appendix B), magazines and other print materials from which to clip pictures and graphic elements to use with their stories, access to the internet and a printer, scissors, glue, tape, paper, pens, markers, newsprint or flipchart paper.

Time needed: 3 hours, more if available.

Learning outcomes:

~ integrate all our data gathering, analysis, decision making, and collaborating skills in developing a series of stories that describe the future they are responsible for in their small group.

Learning objectives:

~ identify consequences of the alternatives;

~ make generalizations and draw conclusions;

~ recognize bias and stereotypes;

~ view problems or issues from multiple perspectives; and

~ communicate and collaborating with others in the problem solving process.

How to:

1. Explain to students that they will work in the same small groups they were in when they fleshed out the four scenarios. They will use the Future Times Newspaper Template to write up the various stories they began to outline in the previous step. Each of the four groups should do one front page for their particular scenario (but they are not limited to one either).

   They should include pictures that depict elements of the stories they are telling and choose some quotes from people in their future that capture the essence of life in that future. Use humor, drama and imagination to tell the stories. Ask each person to also write a short highlight about themselves and something they are doing in that future. They can use the "Today's Highlights" column on the Future Times template.

2. Have students break into their small groups and give them time to work on their front pages.

3. When all the front pages are ready have students reconvene and share the results of their work with each other.

   Note: You may want to arrange for students from other classes, parents, or other people attend the presentations, or perhaps there is a gathering associated with the work you are doing, like a luncheon or banquet, where the students could share their work.

4. In addition to the written stories, and if time permits, students should also be encouraged to develop poems, skits such as an evening news broadcast, and other forms of story telling that they would like to use to communicate their ideas for their future. It is very helpful to have an audience to whom the stories and skits can be presented – even if it is to the other members of the group.

8.2 Create A Scenario Story

Purpose: Crafting an individual story begins a process of personalization of the future to each learner in a unique and lasting way. It is through this personalization that the transformation takes hold that every one of us can "write" our own future, based upon the actions we take on a daily basis. The story becomes a metaphorical map for these students to begin to move through life with a much more sensitive compass. This activity is a capstone effort for the entire process.

Materials needed: A completed set of the four templates completed in step 8.1 In addition, access to all data from the templates utilized to develop the scenarios in Chapters 5-7. These materials could be posted in a central location for students to access, or compiled and copied, or stored on a project WWW site so that each student has easy accessibility to the information. Students should have access to a Word Processor and the Internet. Their final products can be printed and shared, posted on the local project WWW site or www.ffof.org/ site.

Time needed: 3-5 hours, more if available.

Learning outcomes:

- ~ reflect on our experience during the Shaping Our Future process;
- ~ draw upon the individual scenario stories we create; and
- ~ use these stories to craft an essay that lays out a plausible future incorporating the specific scenarios into our future life's story.

> **…when you see everything written down, you say hey, this is real, this is my future, this may happen…**
>
> ~ Felipe

Learning objectives:

- ~ reflect on external experiences and internalize them for personal growth.
- ~ integrate of a set of complex issues into a seamless story.
- ~ improve writing skills.
- ~ view problems or situations from multiple perspectives.
- ~ begin to link scenarios to action in one's life.

How to:

1. Instruct students to use the Future Times Newspaper templates that each of the teams completed in 8.1 and the data from chapters 5-7 of the process.
2. The students are now ready to begin creating their Scenario Story. It is best if this is done as a homework assignment in a place that invokes a creative mood. Each story should be developed to include vignettes of each of the four world's described in each of the Newspaper templates. You may want to include each under separate sub-sections or weave the stories throughout your essay.
3. Ask the students to put themselves into the story. They could write it their essay as:

    a.) a reflection projecting themselves into the future and looking back on this world in a historical narrative, or

    b.) they may want to look forward from today and write about the world as you think it will unfold based on what you have learned from the four worlds described as a future fiction piece, or

    c.) they could write is as a case study (personal strategic plan) identifying this now world and how it will impact on the decisions they have to make in order to reach their goals.

    In each case students should include "lighthouses or markers" that are based on actual events that they could be observing for each of the four "worlds" to determine the direction the real world is evolving. It is in these markers, that they will learn to adjust their actions to maintain the path necessary to reach their goals. It is these lighthouses or markers that they will look for as they read the daily paper, watch the news or converse with their friends. They are the link to self-enlightened action!

To help students with their essay writing, provide them with the handout: "Madman, Architect, Carpenter, Judge: Roles and the Writing Process" by Betty S. Flowers *(see Box)*.

Note: There is an opportunity to create an essay contest within your school, community, or youth organization. If you decide to do this, you will want to select a panel of independent judges and set limits as to the word count for the essays. We would suggest in keeping the essays to a maximum of 2500 words. You may want to define certain style parameters, font sizes, margins, type face etc. so as to have the judges identify most with the written words and not the layout and design. You should have the students understand that the essays need to be grammatically correct, with proper spelling, and punctuation. You may also want to identify some financial sources in the community that could contribute some cash scholarships for the winning essays, and try to have them printed in the local newspapers.

…we got to write stories on what we think is going to happen in the future and just the creativity part of it was something that I think excited many people and it was a good way to tie everything that we've been doing together.

~ Amit

MADMAN, ARCHITECT, CARPENTER, JUDGE: ROLES AND THE WRITING PROCESS

by Betty S. Flowers

"What's the hardest part of writing?" I ask on the first day of class.

"Getting started," someone offers, groaning.

"No, it's not getting started," a voice in the back of the room corrects. "It's keeping on once you do get started. I can always write a sentence or two-but then I get stuck."

"Why?" I ask.

"I don't know. I am writing along, and all of a sudden I realize how awful it is, and I tear it up. Then I start over again, and after two sentences, the same thing happens."

"Let me suggest something which might help," I say. Turning to the board, I write four words: "madman," "architect," "carpenter," "judge." Then I explain:

"What happens when you get stuck is that two competing energies are locked horn to horn, pushing against each other. One is the energy of what I'll call your 'madman.' He is full of ideas, writes crazily and perhaps rather sloppily, gets carried away by enthusiasm or anger, and if really let loose, could turn out ten pages an hour.

"The second is a kind of critical energy-what I'll call the 'judge.' He's been educated and knows a sentence fragment when he sees one. He peers over your shoulder and says, 'That's trash!' with such authority that the madman loses his crazy confidence and shrivels up. You know the judge is right-after all, he speaks with the voice of your most impervious English teacher. But for all his sharpness of eye, he can't create anything.

"So you're stuck. Every time your madman starts to write, your judge pounces on him.

"Of course this is to over-dramatize the writing process-but not entirely. Writing is so complex, involves so many skills of heart, mind and eye, that sitting down to a fresh sheet of paper can sometime seem like 'the hardest work among those not impossible,' as Yeats put it. Whatever joy there is in the writing process can come only when the energies are flowing freely-when you're not stuck.

"And the trick to not getting stuck involves separating the energies. If you let the judge with his intimidating carping come too close to the madman and his playful, creative energies, the ideas which form the basis for your writing will never have a chance to surface. But you can't simply throw out the judge. The subjective personal outpourings of your madman must be balanced by the objective, impersonal vision of the educated critic within you. Writing is not just self-expression; it is communication as well.

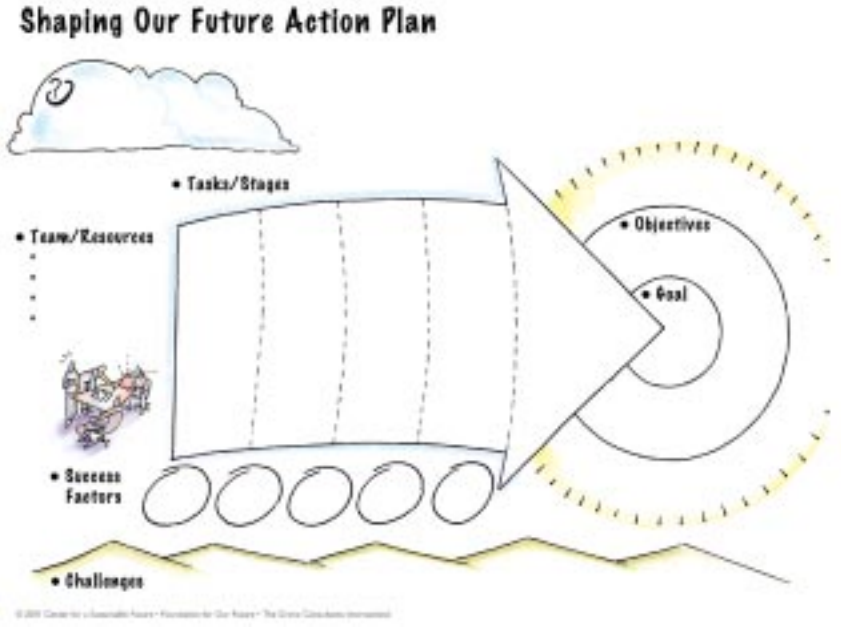
"So start by promising your judge that you'll get around to asking his opinion, but not now. And then let the madman energy flow. Find what interests you in the topic, the question or emotion that it raises in you, and respond as you might to a friend-or an enemy. Talk on paper, page after page, and don't stop to judge or correct sentences. Then, after a set amount of time, perhaps, stop and gather the paper up and wait a day. "The next morning, ask your 'architect' to enter. She will read the wild scribblings saved from the night before and pick out maybe a tenth of the jottings as relevant or interesting. (You can see immediately that the architect is not sentimental about what the madman wrote; she is not going to save every crumb for posterity.) Her job is simply to select large chunks of material and to arrange them in a pattern that might form an argument. The thinking here is large, organizational, paragraph level thinking-the architect doesn't worry about sentence structure.

"No, the sentence structure is left for the 'carpenter' who enters after the essay has been hewn into large chunks of related ideas. The carpenter nails these ideas together in a logical sequence, making sure each sentence is clearly written, contributes to the argument of the paragraph, and leads logically and gracefully to the next sentence. When the carpenter finishes, the essay should be smooth and watertight.

"And then the judge comes around to inspect. Punctuation, spelling, grammar, tone-all the details which result in a polished essay become important only in this last stage. These details are not the concern of the madman who's come up with them, or the architect who's organized them, or the carpenter who's nailed the ideas together, sentence by sentence.

Save details for the judge.

Create a Shaping Our Future Action Plan



Purpose: This is the end of the Possibility Based Learning process – and the beginning of a new cycle for the participants. This is the stage where they go from exploring the future to developing a plan for taking actions that will lead to a more sustainable future.

We have devoted a lot of good energy and effort into creating alternative versions of the future. In the process of doing so we have sorted out forces that we believe are certain, and less in our control, from those that are uncertain and over which we can exercise some control. The question we face at this point is: What will we do to steer the future toward some desirable, positive outcome? How can we affect the forces in our control to bring about changes that will improve our well being in the world?

Our scenarios of the future give us an advantage: they can help us develop strategies that could work in two or more of the four futures we explored. Such strategies have a higher probability of succeeding than strategies that assume only one kind of possible future. So, as you work on these action plans keep asking "How would this work if the future was like each one of our four scenarios?"

Depending on the time available and the nature of the group, the action plan could be something the whole group will create and carry out, or it may something that each person does for his or her own future. Or, each of the four groups that have been working together could choose its own action plan. Each person/group could share their plan and the groups could keep in touch with each other over time to see how each other's plans are going.

Time needed: 60 minutes to define the plan. Longer to implement it.

Materials needed: Shaping Our Future Action Plan Template (Appendix B), paper, pens, markers, tape, newsprint or flipchart paper.

Learning Outcomes:

~ generate, classify and evaluate ideas, objects, and/or events in unique and/or new ways in order to construct original projects that illustrate solutions to real-life problems or concerns.

Learning Objectives:

~ select one outcome from the student-created scenarios that the students are passionate about making happen; and

~ brainstorm and plan actions and resources that will have to occur to achieve the outcome/goal, and follow-through on the plan to implementation.

How to:

1. Explain to students that they will select one outcome/goal from their scenario that they would like to make happen. They will use the Shaping Our Future Gameplan Template to create their Shaping Our Future Action Plan.
2. Ask students to share ideas for a goal that they want to achieve with regard to making a better future. On a flipchart record all the possibilities. Choose one or more by consensus (you may want to use the Nominal Group Technique in Appendix A). If you choose to do more than one Action Plan, have the groups break out and work separately.
3. Have students brainstorm what has to happen to realize the outcome/goal. Explain that they will use the Shaping Our Future Template to arrange the actions, events, and/or resources that will have to occur to achieve the outcome/goal.

   For example, students might decide to create a nature center on the school grounds. See completed Shaping Our Future Action Plan Template for and example.

I think we do have an opportunity to shape our future

~ Nittaya

The bad things. When we think about the bad things that might happen in the future, we can prevent that, we can think of ways to prevent those things from happening and when it comes to good things, we can look forward to it.

~ Nittaya

EXAMPLE

Goal
Establish a nature center on the school campus

Objectives
- Provide a place where teachers and students can study natural systems and carry out science and nature projects.
- Cultivate flowers, shrubs and trees that can be used for plantings around the school grounds.
- Make the nature center so attractive that community members will help support it and volunteer to work there.

Team Resources
Who else do we need to have on board to achieve our goals?
- Local garden club to provide experience and volunteers and fundraising opportunities;
- A nursery to provide expert advice on native plants and stock plants, shrubs, and trees for the nature center.
- Our school's Parent Teachers Association to help with publicity and support from the school administration.
- A local landscape architect to help design the center

Now I feel like I have more power because I get to decide. This is what I want to do - change the future.

~ Nittaya

Tasks
(These could be broken down into stages specifying what has to happen 1st, 2nd, and so on.) We recommend that a person's name be placed beside each task.
- Find volunteers to coordinate the effort
- Contact plant nurseries to see if they will donate plants
- Research native plants
- Compile a list of best practices in regards to nature centers
- Visit other school-based nature centers
- Draw up a master plan for the nature center

Success Factors
- Get OK from the administration
- Raise the Funding
- Faculty member to act as the point person for the project

Challenges
- Funding
- Community Support
- Ample supply of volunteer help
- Secure a location for the center
- Partners that will help with the center

Shaping Our Future Action Plan

• What decisions can I make that will bring a better quality of life to me, my family and my community in the next twenty years?

• Tasks/Stages

- Find volunteers to coordinate the effort
- Contact plant nurseries to see if they will donate plants
- Research native plants
- Compile a list of best practices in regards to nature centers
- Visit other school-based nature centers
- Draw up a master plan for the nature center

• Team/Resources

- Local garden club to provide experience and volunteers and fundraising opportunities
- A nursery to provide expert advice on native plants and stock plants, shrubs, and trees for the nature center
- Your school's Parent Teachers Association to help with publicity and support from the school administration
- A local landscape architect to help design the center

• Objectives

- Provide a place where teachers and students can study natural systems and carry out science and nature projects.

• Goal

Establish a nature center on the school campus

- Make the nature center so attractive that community members will help support it and volunteer to work there.
- Cultivate flowers, shrubs and trees that can be used for plantings around the school grounds.

• Success Factors

- Get OK from the administration
- Raise the Funding
- Faculty member to act as the point person for the project

• Challenges

- Funding
- Community Support
- Secure a location for the center
- Partners that will help
- Partners that will help
- Ample supply of volunteer help

Celebrate Our Accomplishments

Acknowledge and celebrate the good work we have all done and the new relationships and understanding that have developed during the process. We can do this in any number of ways from formal to informal: have a banquet or potluck for all who participated, give certificates of achievement as part of a graduation ceremony, ask each person to reflect on and share their thoughts (using the 3-2-1 activity) record what each person says and provide a written summary for the group, take a group photo and send one to each participant.

I think everyone has power. If you want to do something, you want to bring about change, you put your mind to it and I think anyone can do anything!

~ Amit

Share Our Work and Plans With Others

The Foundation for Our Future has a website where you can:

~ get updates to this guidebook;

~ use interactive electronic versions of the graphic templates in this guidebook to record and print your work;

~ share the scenarios and stories you have created and see the stories that others have created;

~ learn more about how other groups are using scenarios to shape a future that is more peaceful, just, sustainable and prosperous.

The website of the Foundation for Our Future website is at http://www.ffof.org. We encourage you to use it and please let us know your ideas for making it better.

Appendix A.

Process Tools for Facilitators

The process tools described below have different uses. Collectively, they provide the facilitator with an assortment of activities that can help:

- ~ if the process needs some redirecting or to get "unstuck" or to find a different approach to making decisions.
- ~ to get useful feedback from participants that can be used to monitor progress and make adjustments in the process.
- ~ to stimulate a richer picture of what the future may be.

A.1 Plus - Minus - Interesting (PMI)

When to use: This technique is useful if you notice that the participants are too narrow in the ideas they are generating, or if the tone of the conversation has become one-sided (pessimistic, superficial, overly optimistic, etc.) or if one person or group has become too dominant in the process. It can help restore some balance.

Time needed: 15 minutes.

Materials needed: Newsprint paper, easel, tape, markers, paper and pencils or pens.

Learning outcomes:

- ~ demonstrate confidence, knowledge and techniques in evaluating complex problems by viewing them from various perspectives.

Learning objectives:

- ~ learn to suspend judgment;
- ~ develop lateral thinking skills; and
- ~ increase our ability to recognize plausible and or logical ideas, distinguish relevant from irrelevant, and examine the adequacy of data.

Edward De Bono developed PMI. It will help students think about an issue, idea, or decision with three distinct lenses, the "plus" lens, the "minus" lens, and the "interesting" lens.

How to:

Before you begin explain to the students that this session will be done in a different way.

1. On a piece of newsprint paper where all can see it write the question or topic under discussion as a heading. Then make three columns labeled "Plus", "Minus" and "Interesting".
2. Ask students to brainstorm the pluses about the idea, issue, concern or decision that is under discussion. Ask them to each quietly reflect and then write down their thoughts.
3. Have each student provide one plus. Write it down in the plus column on the newsprint and then go on to the next student until you have gone to each student. Start a second round and continue until all ideas are up.
4. Repeat the process for the minuses and for what is interesting about the issue, idea, concern or decision.
5. As a group decide which of the items on the PMI list should be carried over into the next step of the process. You may want to use the voting process described in the Nominal Group Technique if there is a lack of consensus.

A.2 Nominal Group Technique

When to use: This is a good technique if the group is having a hard time coming to consensus about a question or decision that needs to be made, or is having difficulty prioritizing a list of items.

Time needed: 30-45 minutes.

Materials needed: Red, yellow and green stick-on dots (or colored markers), newsprint, markers, paper and pens.

Learning outcomes:

~ select ideas according to predetermined criteria.

Learning objectives:

~ rank ideas individually and within a group; and

~ increase our ability to recognize plausible and or logical ideas, distinguish relevant from irrelevant, and examine the adequacy of data.

How to:

1. Clarify the issue or question that is being considered and write it down on the newsprint where all can see it.
2. Ask students to each silently brainstorm responses and write them down.
3. Record each person's ideas on the newsprint in front of the group. Post the newsprint on walls surrounding the group.
4. Discuss each of the participant's ideas for clarification of their meaning.
5. Ask students to vote on each of the items on the newsprint by placing a dot or dots by the idea or ideas they select. The group predetermines the criteria for selection. For example: if we are trying to decide which driving forces are important which are certain and which are uncertain. Students can place a red dot on the driving forces they feel are most important to their key question. They will place a green dot by the driving forces they feel are most certain, and a yellow dot by the driving forces they feel are most uncertain in relation to their key question.
6. Tally up the vote and organize the list based on the results. Use the results.

Note: You can vote more than once if needed.

A.3 "3-2-1" End of Day Check - In

When to use: This is a feedback tool to give participants the opportunity to "check-in" on where they are, ask questions about the day and express needs they have. Facilitators can use this information to get a better sense of where the group is and what particular needs individuals have.

Time needed: 15 minutes.

Materials needed: Newsprint, markers, paper and pens.

Learning outcomes:

~ reflect on the day's experience and share thoughts about where we are in terms of the value of the process.

Learning objectives:

~ summarize and categorize learning;

~ develop our inquiry skills; and

~ better articulate what kind of help is needed to become a stronger learner and participant.

How to:

1. Write the questions below on a newsprint or chalkboard:
    - What are three things you learned today?
    - What two questions do you have?
    - What one thing do you need?
2. Ask each participant to fill out a piece of paper answering each of the questions. Tell them it is OK if they have no answer for some of the questions.
3. Read over the responses and summarize. Report back to the group when time is available about what they are learning, what questions they have and your responses to them, and what needs you can address and how that will be done.

A.4 What did you like best about today? What would you have changed?

When to use: This is also an end-of-day or periodic check-in tool to get useful feedback from participants. It's shorter and simpler than 3-2-1.

Time needed: 10 minutes.

Learning outcomes:

~ reflect on the day's experience and share thoughts about where we are in terms of the value of the process.

Learning objectives:

~ strengthen inquiry skills; and

~ articulate what kind of help is needed to become a stronger learners and participants.

Materials needed: Newsprint, markers, paper and pens.

How to:

1. Write the two questions above on a newsprint for all to see.
2. Ask students to write their responses to the two questions above on a piece of paper.
3. Collect the papers. Read and summarize the responses.
4. When time is available share your summary, making sure to address what changes you will make as a result of their suggestions and which ones you won't, or can't, and why.

A.5 Visioning Activity

Purpose: To stimulate student's imaginations and to get them more into a "future perspective". This activity can be used to help students imagine a particular future scenario, or a preferred future (which you might use during the "Create Action Plan" step).

Learning outcomes:

~ use our imaginations to create clear visions of a particular future.

Learning objectives:

~ think imaginatively about the future.

Time needed: 30 minutes.

Materials Needed: markers, crayons, colored pencils glue, colored paper, other materials with which students can represent the images, thoughts and ideas they had during the visioning exercise.

How to:

1. Explain to students that the visioning activity is used to help them create robust, vivid, descriptive images of a particular (or a preferred future) that will stir them to action. When students have a fully formed vision of a preferred future it will serve as a "pull", inspiring them to identify and take actions that will continually move them closer to their preferred future.
2. Do the visioning activity as a whole group even though you have assigned students to one of the four future scenarios. Advise them to keep their particular scenario characteristics in mind when envisioning the future.
3. Before you begin the visioning exercise you might want to set the stage so that the students' visions will be as vivid and fully fleshed out as possible. Some suggested ways to set the tone for the exercise are as follows:
    - darken the room,
    - play quiet soothing music in the background
4. Read the Visioning Script below.

    Note: It is very important to read the script very slowly so that the students have time to form clear images in their mind's eye.

5. When you have completed the reading allow students a minute or two to silently reflect on their vision. Then ask them to draw a picture that illustrates it. Provide markers, crayons, colored pencils, glue, colored paper any and all supplies that will enhance their ability to capture their vision. When they have completed the picture of their vision have them write email headers, short story titles, newspaper headlines that clearly describe what life is like in their future. Prompt them to consider the following:
    - work
    - environment
    - politics
    - technology
    - family life
    - leisure time
    - community
    - economics
    - education

Script: A Day in the Life: 2100

Close your eyes, take several deep breaths, relax and let your mind empty of all thoughts of today. Imagine that you are sitting on a beautiful grassy knoll. In the distance you can barely see a huge stone wall that extends as far as you can see in both directions. As you walk closer to the wall, you notice a door inside the wall. You walk up to the door and push on it. It opens very slowly, giving you a view of a completely new world. You step through the doorway, entering a future world. The year is 2100. (Change the date as appropriate)

Look around. What do you notice first? What does the sky look like? What season is it? What do you see? Does the air have a smell? If so, what does the air smell like? What are you wearing? Anything like the kinds of clothes people wore in the early 21st century, or are they totally new and different? How do you earn a living? What is your job title and job description? What are children doing? What do playgrounds look like? Are there playgrounds? How are people living? Single family dwellings, high rise buildings, tents? What does your home look like? How are they transporting themselves? What is your favorite meal? Why? What do you do for fun? What would a typical day be like in this future?

Imagine that you have awakened in this future. Write a short story describing a day in your life in this future.

Appendix B.

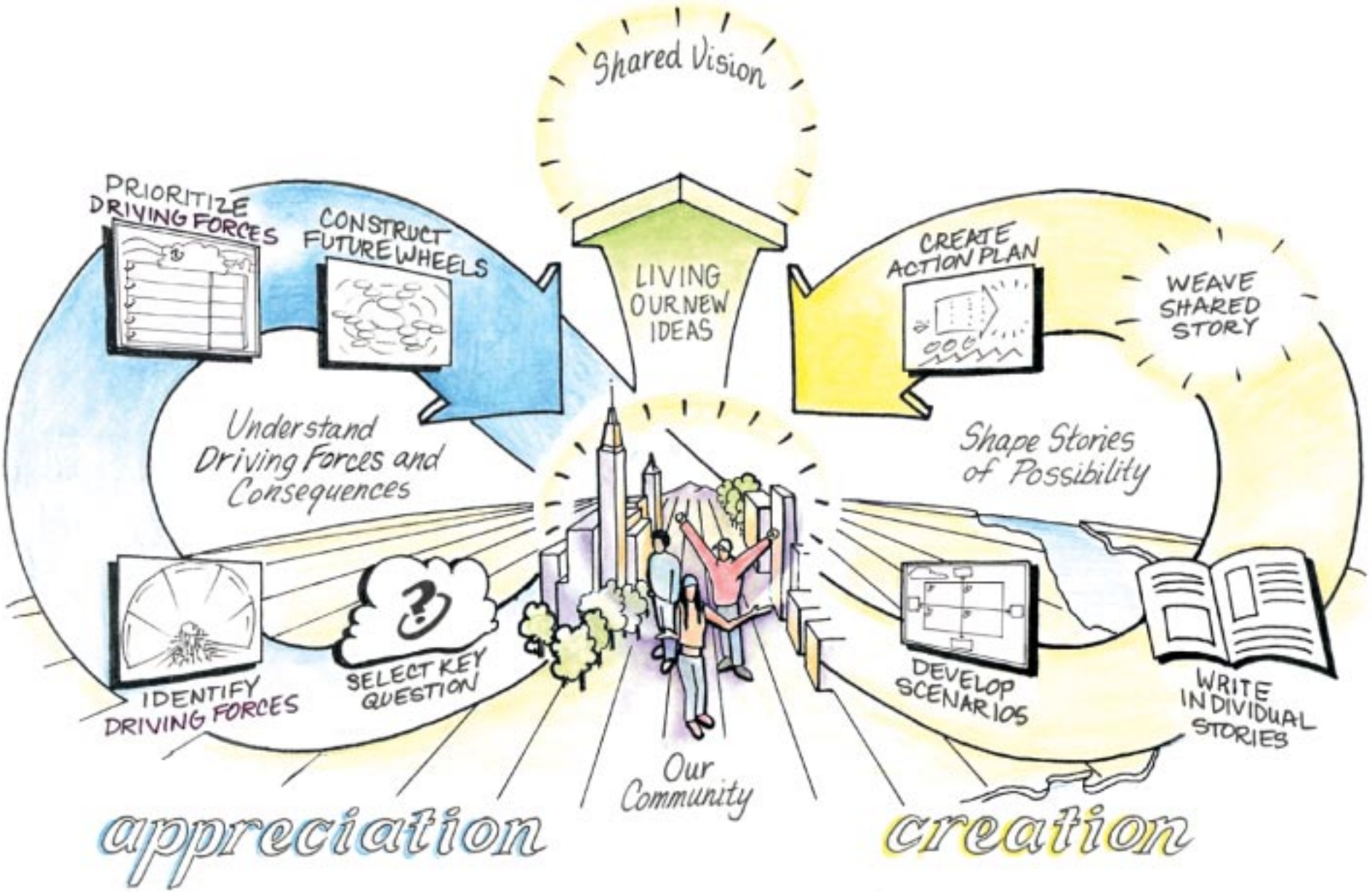
Blank Templates AND HOW TO make wall - sized templates TO USE DURING THE PROCESS

This section contains blank versions of each of the graphics templates used in the Shaping Our Future process. They are provided so you can copy and use them as worksheets. You should also enlarge them so that they can be taped up on the wall and used to record the ideas and outcomes that result from the steps where they are used. The enlarged templates make it easier to see the whole group's ideas and efforts as you work through the process. A minimum size to enlarge to is around 3 feet by 2 feet. Bigger is even better, if you have the space.

One way to make large versions of these templates is to copy them onto an 8.5 by 11-inch transparency. Then you can put the transparency on an overhead projector and shine the enlarged image onto a big piece of newsprint paper and trace the template with markers. Use colored markers to make them more lively. You can obtain rolls of newsprint from a newspaper company. They often have remnant rolls from each day's print run which you can obtain for a small fee or for free.

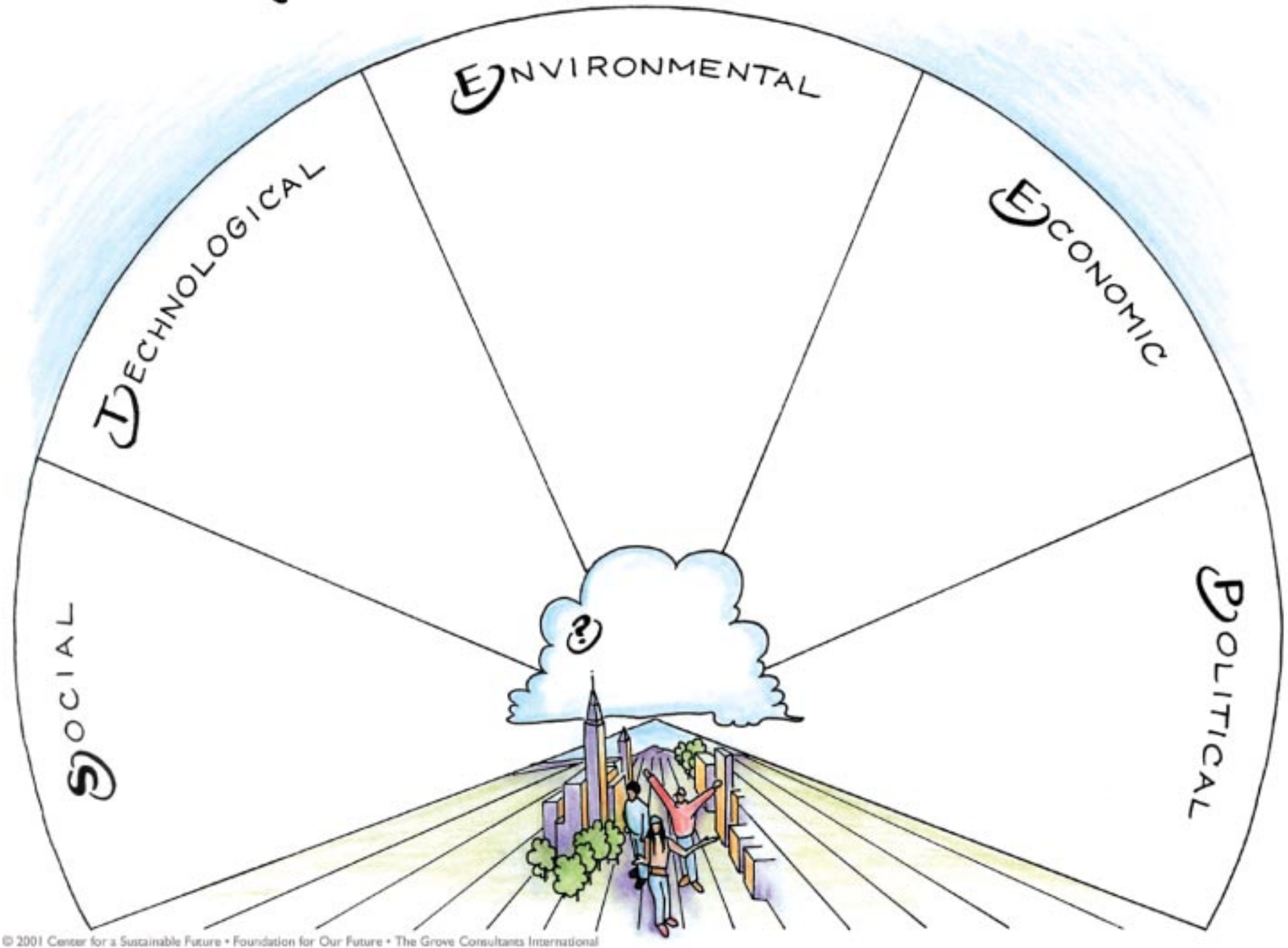
Another way to enlarge these templates is to take them to a copying center (like Kinko's) that has a special copier that can enlarge the 8.5 by 11 inch original by at least 400%. These enlargements will cost several dollars each. Color enlargements are often quite expensive, so you can use colored markers to brighten up the black and white enlargements.

Possibility-Based Learning Process

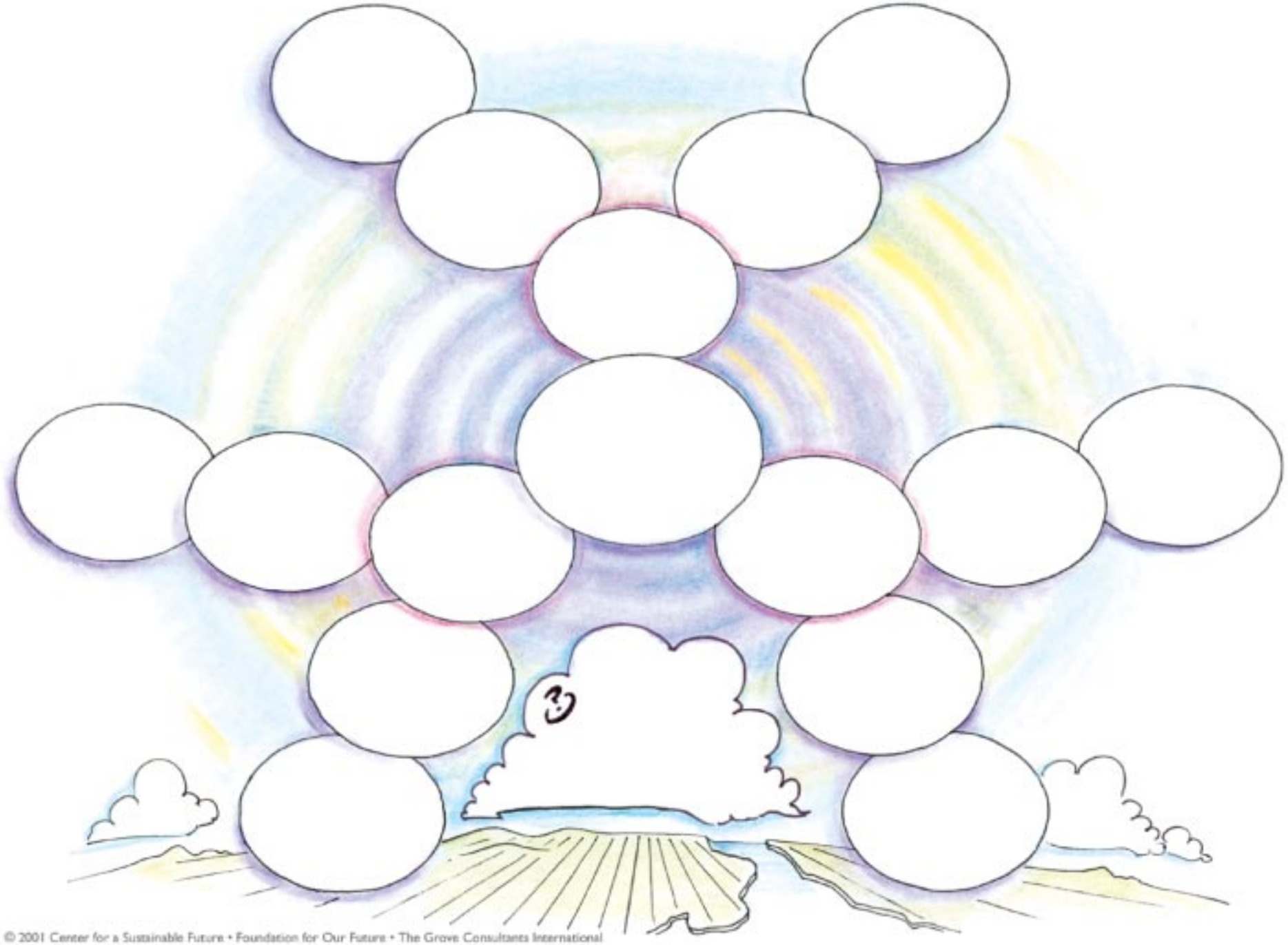


Key Questions

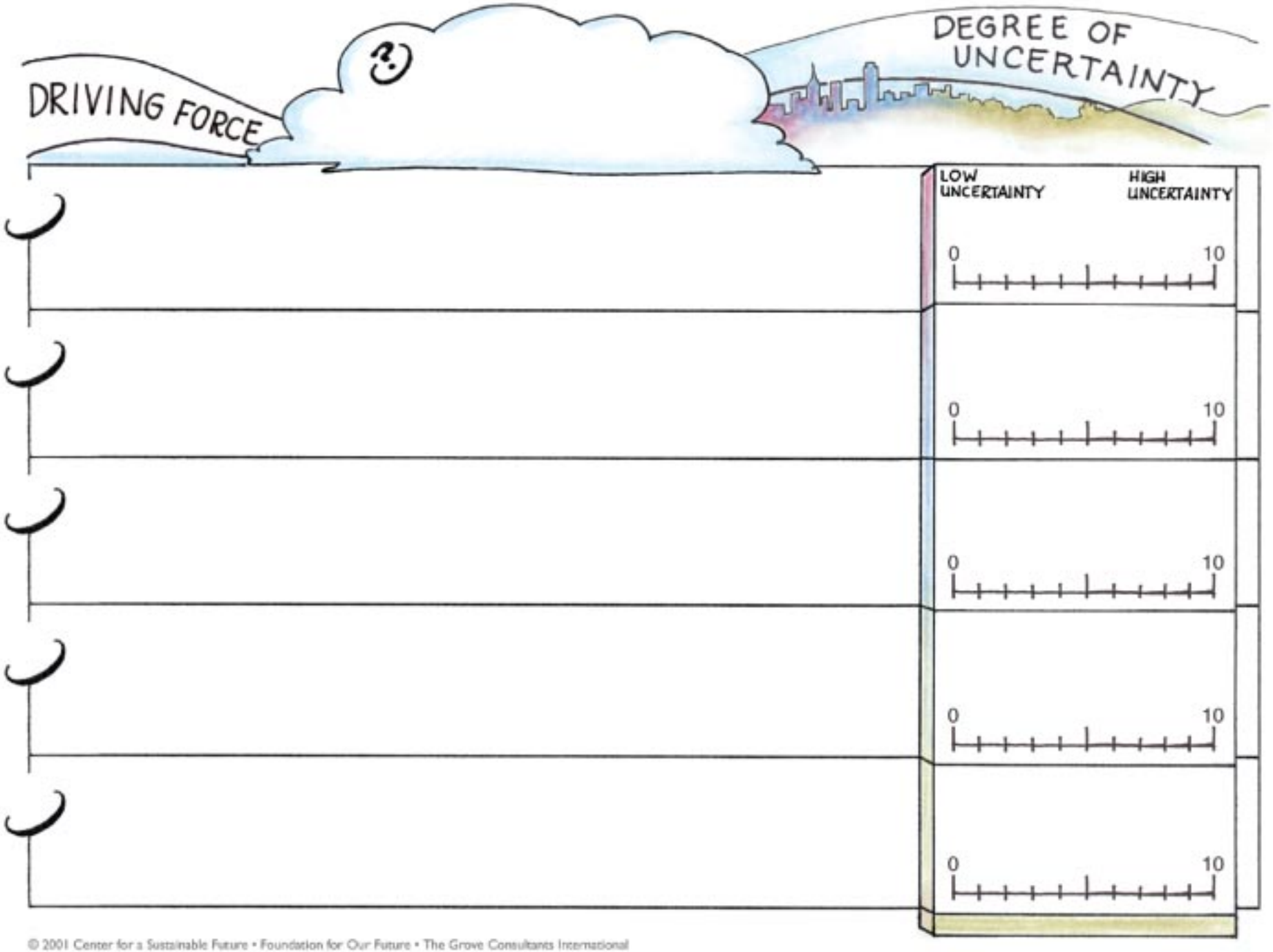
STEEP Driving Forces



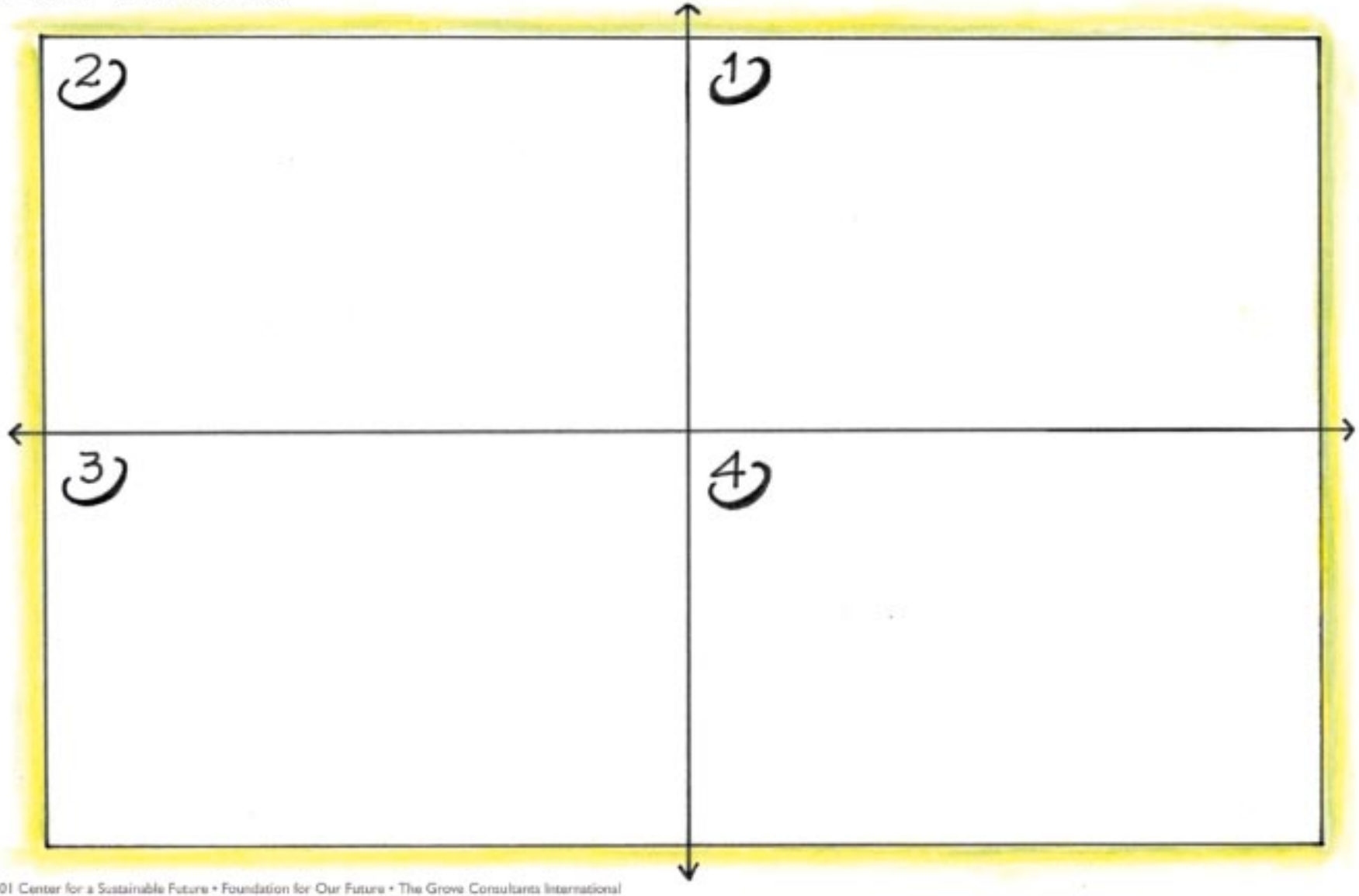
Future Wheel

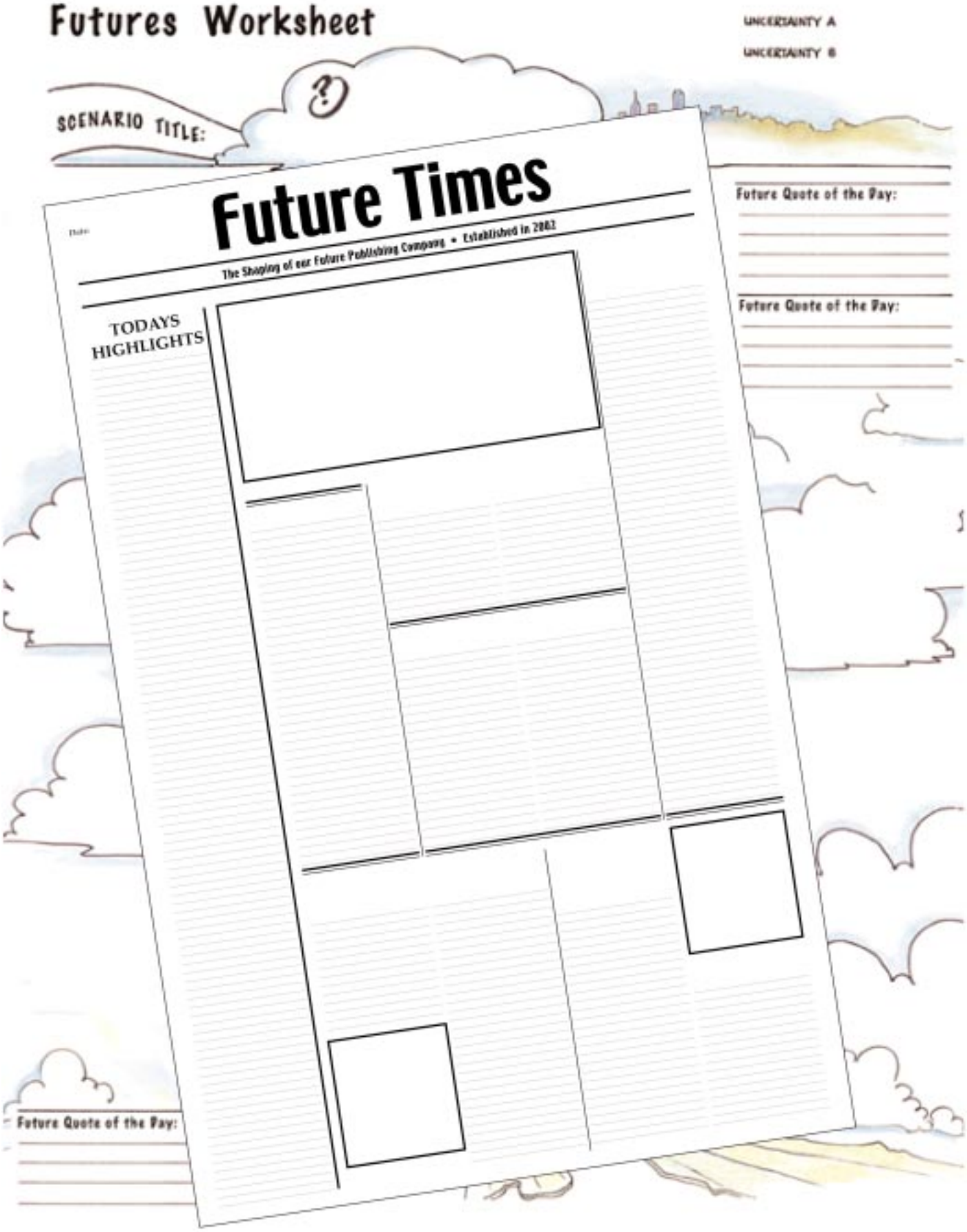


Gauging Uncertainty Worksheet

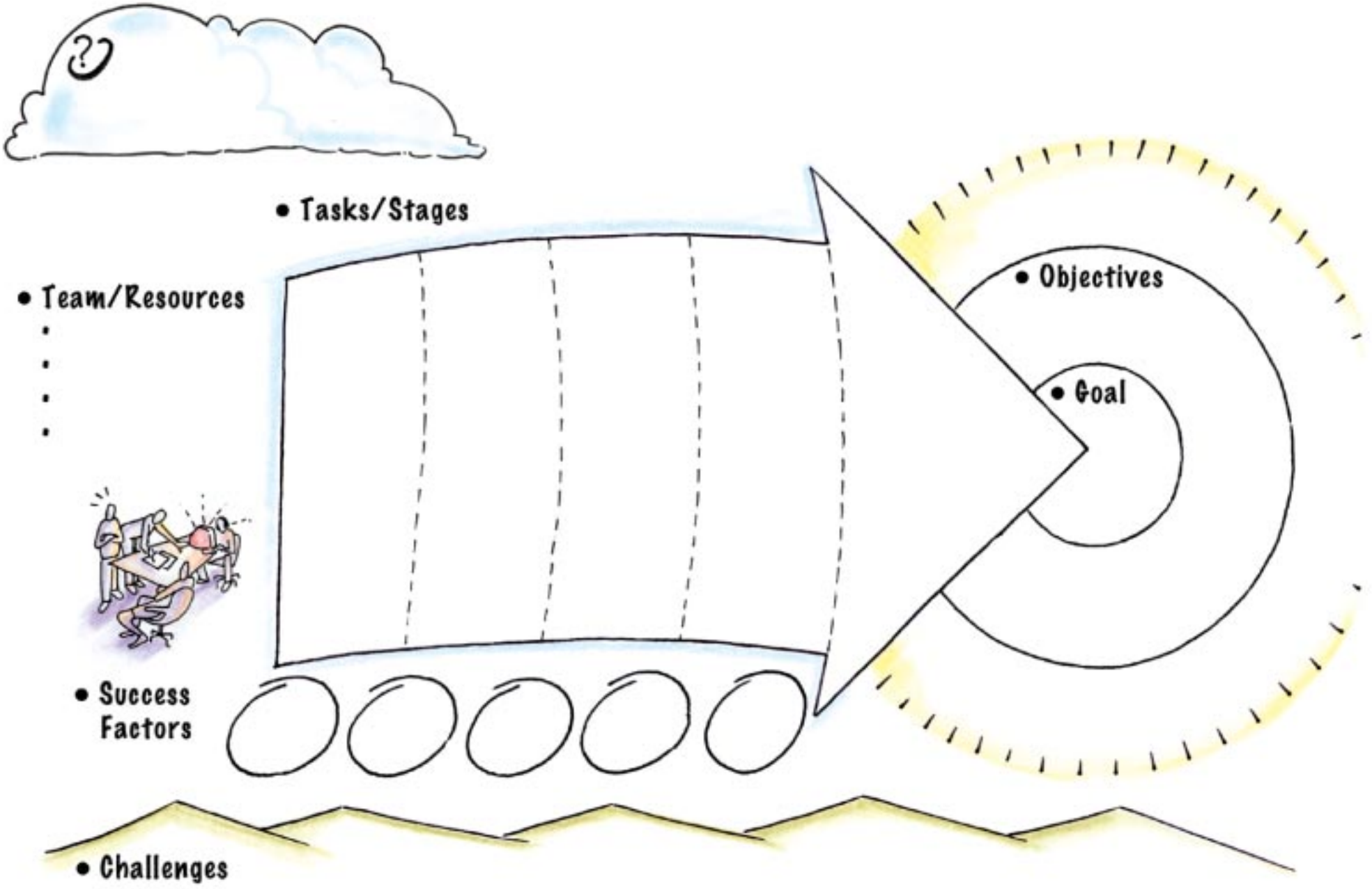


Four Futures





Shaping Our Future Action Plan



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