Discover and Shape the Future

Guide for the Use of the Future Box "Tourism, Climate Change and Sustainable Development" in Schools and Universities

Content

This is how you design lessons using the

Future Box Tourism

1

Look at the content of the guide and choose the unit you want to implement.

2

Download the related materials. You can find them there: https://ph-tirol.ac.at/node/2581 www.netzwerkbinetirol.tsn.at www.responseandability.com/ futurebox

3

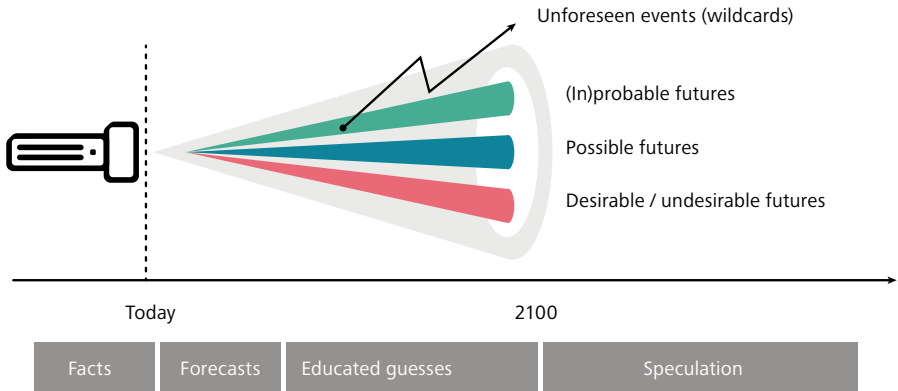Bring future issues into your classes / courses.

1. Future in (High) School and Universities.

An Introduction

Never in the history of humankind has the world been changing as fast as it is today. The dynamics are unprecedented: what were just dreams, inspired by science fiction movies or novels, is a reality today. Digitalization-driven technologies such as genome editing or robotics are finding their way into our everyday lives. Globalization and the internet are turning earth into a village, providing access to an incredible quantity of information. However, progress also has its dark sides. Climate change, the disappearance of habitats, and species extinction threaten the earth and, thus, the foundation of our existence. At the same time, many of us still live in (extreme) poverty, are excluded from political participation, and lack basic social services such as health care, quality education, decent jobs, etc. Current situations and unforeseeable developments are associated with uncertainty. Many (young) people ask themselves many questions about the future, like: "How will and how do I want to live in the future?" And how can I prepare myself for it? Futurology offers an approach to these big questions. It forms the basis for the Futurium Future Boxes, which were used as a basis for this Future Box, "Tourism, Climate Change and Sustainable Development".

About futurology: The discipline "Futurology" emerged after World War II, aiming to systematically deal with uncertainty. According to the definition of the renowned German futurologist Rolf Kreibich, futurology is „the scientific study of possible, desirable and probable future developments and design options as well as their preconditions in the past and present." Sounds complicated? It's not: the underlying concepts are quite simple. Futurologists assume that,

Unforeseen events (wildcards)

(In)probable futures

Possible futures

Desirable / undesirable futures

Today

2100

Facts	Forecasts	Educated guesses	Speculation

although the future cannot be predicted precisely, trends can be used to imagine possible futures and help to shape them. In this respect, futurology can be seen as a transformative science aiming at achieving change. Instead of providing forecasts, different scenarios are developed. Scenarios can be described as concrete possible states or developments in the future. They might be possible/probable/unlikely, desirable, or even undesirable. Images of future states or developments help us imagine possible futures and make decisions so that the desired future becomes a reality and an undesired one does not. Since one scenario depicts only a small section of possible developments, the scenario technique is used to

develop several scenarios. In the Futurium Future Boxes and the Future Box "Tourism, Climate Change and Sustainable Development", different trends are picked up, and various categories are outlined for each trend. The trends and categories can be used to develop various scenarios playfully. The trend cards can be used on their own or embedded in a 3-day-Bootcamp of "Tourism, Climate Change and Sustainable Development". By combining different trends, the players explore different futures, learn to think systemically and understand that the future is a space full of possibilities.

The scenarios of the Future Box "Tourism, Climate Change and Sustainable Development" can be used for project days on the future of tourism in the context of climate change and Sustainable Development. The scenarios help students imagine and construct possible futures.

Being able to imagine possible futures is especially important because people should be able to make responsible decisions in the present, initiate new projects, and find creative solutions to problems.

And always keeping the 'big picture' in mind: living in harmony with nature and people.

That is why, in addition to the trend cards for developing scenarios, the Future Box contains additional cards and the link to the description of methods that follow the logic of a Design Thinking process when appropriately orchestrated. We also recommend Design Thinking as a mindset; the educational science basis is moderate constructivism (Dubs 1995) with the understanding that knowledge is always self-constructed. Problem-solving, project and participation orientation as didactic principles complement the considerations on the design of courses / lessons. What does this mean in concrete terms? The players / learners start with research in order to get a comprehensive picture of the present and ideas about the future. Based on the research results and the scenarios, the players / learners develop a vision, define challenges / fields of action, and finally set their own ideas, which they ideally implement as well. Following this process, they transform from 'futurologists' to shapers of the future.

The future is complex. Therefore, questions about the future usually concern different knowledge domains and disciplines. This is the reason why futurology has to be interdisciplinary and why experts from different disciplines work together on research projects. The Future Box was designed in an interdisciplinary way. It can therefore be used in a wide variety of subjects / disciplines and interdisciplinary across subjects. However, the Future Box is not only flexible in this regard, but also in terms of scope. In the box, you will find suggestions for use in lessons / teaching´.

Learners develop skills that are particularly important for learning and acting regarding the future: to communicate and collaborate, to think critically, systemically, empathically and value-oriented, to make decisions, and to develop (and, if possible, implement) solutions.

Shaping the future should be fun. This aspect was particularly important in the box development. The materials should inspire and motivate people to tackle the future themselves and make it better.

Bedürfnisse
Needs

Hoffnungen
Hopes

Weltbevölkerung
World population

Kulturelle Vielfalt
Cultural diversity

Glauben
Faith

Werte und Regeln
Values and rules

2. Tourism, Climate Change and Sustainable Development

How do we want to shape Tourism in the Future?

People have always been on the move; early forms of traveling existed since ancient Egypt. However, tourism, especially mass tourism, is a relatively new phenomenon that is now reaching the limits in many places. From 2030, each year 1.8 billion people will be traveling across borders, which is twice as many as in 2010 (World Tourism Organization). New big markets arise, and people travel more often but for shorter periods. The consequences are immense: increases in land and resource consumption but also a growing dissatisfaction among the population in many destinations, keywords being "overtourism" and "labor shortages." Tourism is an important contributor to climate change, especially due to the associated emissions by air and/or car. On the other hand, climate change will also fundamentally change tourism. In many places, winter sports resorts need new concepts, and many classic summer beach destinations will be too hot for spending vacation there.

Implementing Sustainable Development in tourism is an important and complex challenge that requires a change of the mindset of all people involved: travelers, tourism businesses, and those with political responsibility all have to find new ways of doing things. In the future, destinations will no longer focus primarily on marketing and maximizing overnight stays but will have to ask themselves about the purpose of tourism and how tourism has to be designed in order to contribute to a better life for the local population and the development of regions. The central question is, therefore: What kind of tourism do we want in the future, and how can we shape it?

3. Bootcamp "Tourism, Climate Change and Sustainable Development"

The term Bootcamp originates from US military jargon. Colloquially, it stands for the process or place of basic training but was used in connection with the re-education of offenders or difficult-to-educate youth, quite rightly in a controversial way. Meanwhile, however, the term is used in many different contexts, such as in connection with sports, coding, or medicine, etc., and stands for a short intensive examination of a topic.

In relation to climate change, tourism and Sustainable Development, the use of the term Bootcamp is intended to convey the urgency necessary to meet the challenges of the 21st century – in this specific case, climate change.

The Bootcamp "Tourism, Climate Change and Sustainable Development" is designed for three project days. It can be supplemented by the phase of project implementation (within the framework of courses/project teaching) and thus extended to further days. Individual methods can also be used independently of the project days in teaching and learning.

The Design Thinking process is reflected in the procedure (see figure on the next page), the corresponding mindset in the open-ended, researching attitude, which promotes a high degree of participation and creativity.
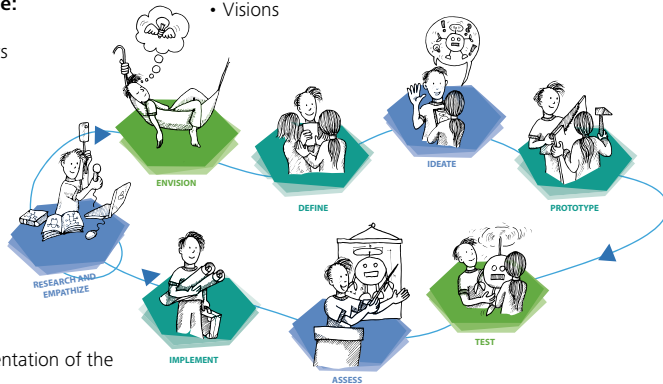
Bootcamp Procedure
(Design Thinking Process)

Envision + Define
• Research findings
• Keynote(s)
• Scenarios
• Insights
• Challenges
• Visions

Ideate + Prototype
• many (crazy) ideas
• innovative, collaborative, creative
• "think with hands"

Research + Empathize:
• Excursion
• Discussions/Interviews
• Conversation Dinner
• Keynote(s)
• Further resources

Illustration: Beatrix Rauch

Research + Empathize
• accompany the implementation of the project
• question visions and challenges, develop new ideas

Implement
• implement project
• in iterative loops

Test + Assess
• test prototypes: on the target group and on experts
• revise
• assess regarding impact and feasibility

4. The Bootcamp in Detail

The Bootcamp "Tourism, Climate Change and Sustainable Development" comprises a total of three project days (and ideally a subsequent project implementation phase). In the course of the three days, learners engage in exploring the present and shaping the future they want. The educational materials are designed to support awakening students' interest in globally relevant future issues and enable them to engage constructively, critically, and playfully with the future. Students search for answers to their own and global questions about the future.

The pedagogical concept focuses on the development of competencies that go beyond the "4Cs" of the "21st Century Skills"[1]:

- Critical thinking and problem solving
- Communication
- Collaboration
- Creativity

but comprise other competencies that are of particular importance[2] regarding Sustainable Development, such as the ability to
- think and act in a value-oriented way
- take a multi-perspective approach
- develop empathy and compassion
  (for all living beings and nature)
- take responsibility, and
- act transformatively.

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[1] *https://www.batelleforkids.org/networks/p21*
[2] *Wiek et. al. 2011, Rieckmann 2018*

4.1 Project Day 1 – Immersion and Research

Introduction to the Present and Future of Tourism

The first day offers an introduction to the present and future of tourism in the context of climate change and Sustainable Development. The students deal with it on the basis of their previous knowledge, personal ideas, expectations, and fears. During an excursion, they experience and see the effects of climate change on people and the environment, always in the context of tourism and Sustainable Development. Ideally, the students are accompanied by stakeholders who not only share their knowledge but also discuss develop-ments, challenges, and opportunities with them at eye level. In the course of this research phase, they also conduct interviews with tourism professionals, locals, tourists, and other stakeholders. The first project day may conclude with a Conversation Dinner with meaningful conversations with colleagues and various stakeholders during a climate-friendly dinner. During this day, learners will be sensitized to the situation and (possible) developments, opportunities, and challenges.

Fotos: Hilde Matouschek

🕐 **Duration:** 8:00 a. m. – 9:00 p. m.
(breaks included)

🎯 **Competencies:** Learners …
- research (independently) on climate change, tourism and Sustainable Development.
- strengthen their communication skills in discussions and interviews.
- strengthen their ability to think critically, empathically, systemically, and value-oriented with multiple perspectives.
- are able to reflect on their learning process.

⬇ **Methods in the download area:**
- Sociometrics
- Excursion (including an excursion guide using the example of the Stubai valley)
- Interviews
- Keynote (Climate & Tourism)
- Conversation dinner

Instead of ending the 1st day with a Conversation Dinner, the 2nd project day could start with a Conversation Breakfast.

4.2 Project Day 2 – Understanding and Visioning

Present Findings, develop Futures, define Challenges

On the second project day, learners start teamwise by analyzing their research results. They excerpt findings, developments, challenges, opportunities, and inhibiting or supporting influencing factors and present them in plenary. After short impulses on the future of tourism and on the necessary organizational basics oriented on the Inner Development Goals, the learners develop wish and nightmare scenarios with the trend maps. On the basis of the scenarios, they develop a desirable image of the future and create a future reportage in the form of a video from the future. Subsequently, they define one or more challenges that arise from the perspective of today concerning the realization of the vision.

Extension possibilities arise from the use of wild cards with events that put the chosen scenario to the test, impulse cards with provocative questions, or challenge cards (instead of / supplementary to the challenges that the learners formulate).

Fotos: Christian Baumgartner / response & ability

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Duration: 8:00 a.m. – 5:00 p.m. (breaks included)

Competencies: Learners …
- collaborate while preparing research results
- communicate about research results and discuss trends.
- develop scenarios for possible futures, discuss dilemmas and challenges.
- decide on one of the scenarios.
- collaboratively and co-creatively develop a script for the "video from the future".
- formulate (individually) concrete challenges.
- strengthen their ability to reflect their individual and collective learning process.

Methods in the download area:
- Insights
- Keynote (the inward view)
- Scenarios (including a keynote, trend, and supplementary cards)
- Video from the future (including a storyboard template)
- Design challenge

4.3 Project Day 3 – Developing Solutions, Reflecting on the Learning Process

Presenting Ideas for possible Solutions in the Form of Prototypes

On the third day, the participants decide on one of the challenges based on their interests and then, teamwise, develop concrete ideas that are suitable for making the desired future become a reality. The ideas are implemented in the form of prototypes and can take the form of products, services, processes, etc. They are developed as far as possible during this third day. Students should have an opportunity to test them by presenting a challenge and solution (with a prototype) to the target group and "experts" to revise the prototype based on the feedback and to present the revised solution at the end.

Subsequently, the ideas are evaluated with regard to feasibility and impact and should then be realized / implemented within the framework of a project.

The third project day concludes with the reflection of the learning process. Learners revisit the process and reflect on what they have done and learned in the process.

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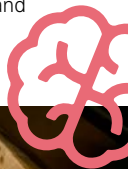
🕒 **Duration:** 8:00 a. m. – 4:00 p. m.
(breaks included)

🎯 **Competencies:** Learners …
- view developments critically and solution-oriented.
- communicate and collaborate.
- co-create prototypical solutions and present them.
- document and share their results.
- reflect on their working and learning process, and are able to transfer the results of their reflections to other life worlds.

⬇ **Methods in the download area:**
- Yes but, Yes and
- Ideation (Crazy 8)
- Draw your neighbour
- Prototyping (including a keynote and descriptions of selected prototyping methods)
- Presentation and feedback
- Test and iterate prototypes
- Presentation and feedback
- Reflect and plan

5. The Future Box: Materials und Methods

5.1 Materials for the Bootcamp

The Future Box "Tourism, Climate Change and Sustainable Development" is based on the Future Boxes of the Futurium Berlin (www.futurium.de), which are available as an Open Education Resource. It was created by Helga Mayr (Pädagogische Hochschule Tirol) and Christian Baumgartner (response & ability GmbH) and is designed for working in teams of 5 or 6. One box contains a total of 7 different sets of cards to choose from as well as methodological instructions students can use to create scenarios.

Download materials for preparing and conducting the lessons complement the printed card set. These materials can be downloaded from the websites of the University College of Teacher Education Tyrol (https://ph-tirol.ac.at/node/2581), the network BiNE Tyrol (www.netzwerkbinetirol.tsn.at), and the website www.responseandability.com/futurebox. For preparation, teachers will find didactically and methodologically elaborated suggestions in the documents on how the methods can be used in teaching and learning. This facilitates the preparation. For implementation, accompanying presentations, work templates, and supplementary materials for pupils / students have been designed.

The educational materials are published under a CC-BY-SA license. More detailed information can be found on the imprint.

Content of the Future Box

Card Sets:
- Trend cards
- Megatrend cards
- Wildcards
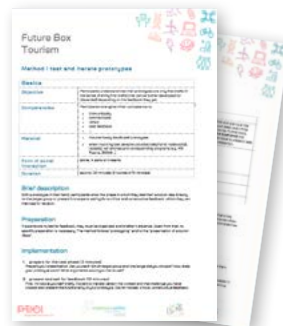- Perspective cards
- Impulse cards
- Challenge cards

Scenario Guide for Pupils / Students and Teachers / Lecturers


Download Materials

Download Materials:
- Guide (incl. 3 days Bootcamp)
- Presentations
- Method instructions incl. templates

Some guiding questions of the Future Box "Tourism, Climate Change and Sustainable Development" are:

- **Where will we travel in the future?** (Category: Destinations)
- **What will be our travel motives in the future?** (Category: Travel Motives)
- **What will be our transportation means on vacation in the future?** (Category: Mobility)
- **What role will the local population play in tourism in the future?** (Category: Local Population)
- **Who will work in tourism in the future?** (Category Work)
- **What will we eat on vacation in the future?** (Category Food)
- **How will tourism businesses be organized and managed in the future?** (Category Organization and Management)

Overview of the Card Sets of the Future Box:
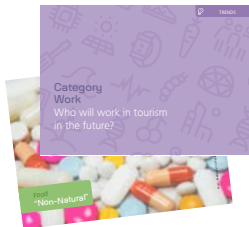
Trend Cards / Category Cards

The trend card set consists of 7 category cards, each of which is assigned 4 trends. With the help of pictures and descriptive texts, the set gives an overview of different future trends in tourism. The pupils / students develop different future scenarios in teamwork using the trend card set. In doing so, they explore possibilities of how the different categories (destinations, travel motives, mobility, work, food, organization and management) could develop. Future options thus become tangible and imaginable. They can be discussed, further developed, and serve as a source of inspiration for the students' visions.

Megatrend Cards

A total of 10 megatrends and their potential impact on the world are described. Megatrends are visible changes and movements that will influence our world for decades to come. Using this set of cards, students can develop hypotheses about how megatrends will affect tourism. They can also explore what implications the trends might have for a previously created future scenario.

Wildcards

This set of cards consists of 5 wildcards, each showing an extreme future development. It is unlikely that these developments will occur, but they are possible. The wildcards can be used to account for unexpected events when developing future scenarios.

Perspective Cards

The 14 perspective cards enable the students to look at the respective future topic from multiple perspectives. The perspectives of politically engaged civil society, local population, economy, environment, and guests are each represented by two players and by two cards. Each of the 12 people and the environment are interested in specific future issues of the topic. By slipping into those roles pupils/students broaden their own perspective and understand that there are always different ways of looking at a topic, which all have their justification.

Impulse Cards

The 5 impulse cards each contain a provocative question on the topic of the Future Box that have to be answered by "yes" or "no", although there is no clear answer. Pupils/students are encouraged to take a clear position and to exchange their different views. The impulse cards are suitable for introducing the topic.

Challenge Cards

Each of the 5 cards contains a challenge formulated as a question related to the content of the Future Box. It challenges the students to come up with creative ideas and solutions and to turn them into functional prototypes.
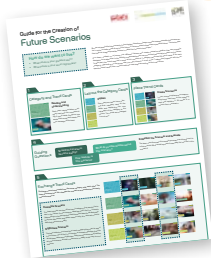
Scenario Guide for Pupils/Students and Teachers/Lecturers

The methodological guide supports the students in creating future scenarios.

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The Download Materials at a Glance

Method descriptions, presentations, and templates
With the descriptions of all methods, the presentations and templates used in the Bootcamp "Tourism, Climate Change and Sustainable Development" guidance is quite easy.

All documents can be downloaded here:
- University College of Teacher Education Tyrol:
  https://ph-tirol.ac.at/node/2581
- Network BiNE Tyrol:
  www.netzwerkbinetirol.tsn.at
- response & ability GmbH:
  www.responseandability.com/futurebox

On the next page you will get an overview of the methods.

ENVISION

RESEARCH AND EMPATHIZE

DEFINE

IDEATE

PROTOTYPE

IMPLEMENT

ASSESS

TEST
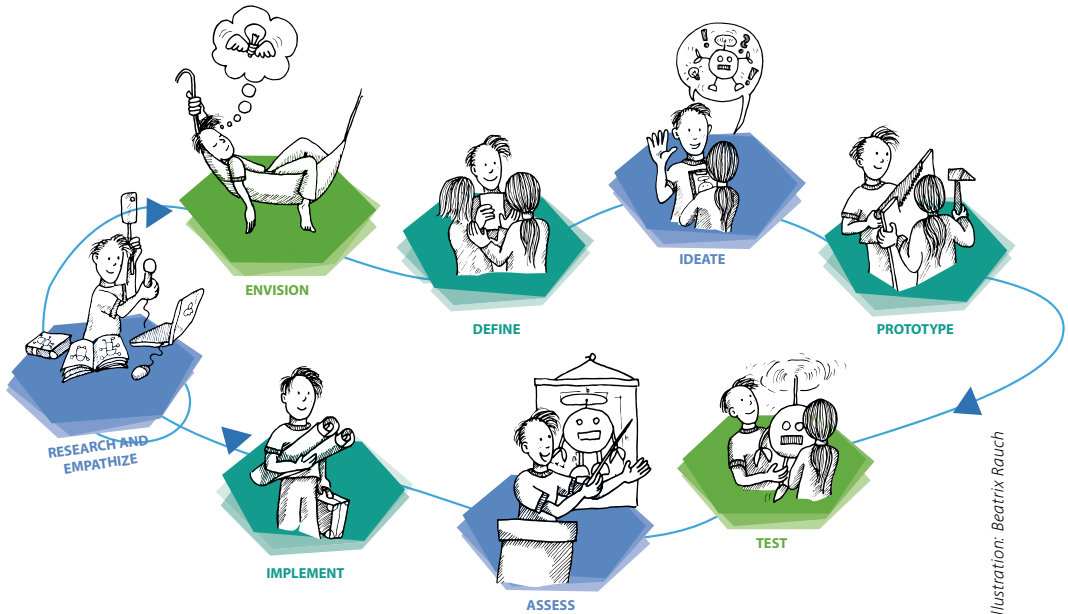
Illustration: Beatrix Rauch

5.2 Methods for the Bootcamp

2nd Day: 8:00 a.m. – 5:00 p.m.

Envision + Define

Keynote   Insights   Scenarios

Yes, but … / Yes, and …

Video from the future   Design Challenge

1st Day: 8:00 a.m. – 9:00 p.m.

Research + Empathize

Sociometrics   Excursion

Interviews   Keynote   Conversation Dinner

Further sources *(if necessary)*

3rd Day: 8:00 a.m. – 4:00 p.m.

Ideate, Prototype, Test + Assess

Develop and choose ideas   Draw your neighbor

Build prototypes   Test and revise prototypes

Present prototypes in plenary   Reflect (learning) process and solutions

Photo: Christian Baumgartner / response & ability

6. About us

The University College of Teacher Education Tyrol sees itself as a cosmopolitan educational campus for all professional fields of pedagogy and stands for research-led education, advanced training, and continuing education. It is oriented towards Education for Sustainable Development and regularly promotes the development of corresponding educational formats. For years, this has included training courses for teachers on tourism and Sustainable Development, all of them lasting several days and co-designed and implemented with the consultancy response & ability GmbH. Within the framework of the cooperation, Helga Mayr (University College of Teacher Education Tyrol) and Christian Baumgartner (response & ability GmbH) have been developing materials for teaching and learning: on Megatrends and Sustainable Development in tourism and currently on the Bootcamp "Tourism, Climate Change and Sustainable Development". The second one was inspired by the Future Boxes of the Futurium Berlin, which has kindly provided the templates (see 7. about the Futurium) and could be created with the support of the Land Tirol in the framework of the network BiNE Tirol (network Education for Sustainable Development Tyrol).

The materials are available and adaptable under a CC-BY-SA license in German and English (see page 25).

7. About the Futurium – a House full of Futures

Photo: futurium

This box is based on materials from the Futurium, the House of Futures in Berlin. Under one roof, it houses a future museum with living scenarios, a future lab for trying things out, a future forum for collaborative dialogue, and a future stage for artistic projects. Foreseeable, conceivable, and desirable futures are presented and discussed in the Futurium. Get to know new things, question the familiar, and take up impulses for action: The Futurium offers its visitors a glimpse into the world of tomorrow. At the heart of it all is the big question: "How do we want to live?"

The Futurium provides educational materials, currently Future Boxes on the topics of work, energy, nutrition, health, mobility, and cities. They are published under a CC-BY-SA license and can be further developed and changed.

8. Sources and Literature

Education

Books/Articles
- Creative Schools: The Grassroots Revolution That's Transforming Education (Sir Ken Robinson)
- Lernen: Gehirnforschung und die Schule des Lebens (Manfred Spitzer)
- Reinventing Organizations (Frederic Laloux)
- Konstruktivismus: Einige Überlegungen aus Sicht der Unterrichtsgestaltung (Rolf Dubs)

Weblinks
- www.instituteofplay.org/resources
- http://fablearn.org/fellows/2014-fellows-resources
- www.instructables.com/teachers
- www.ted.com/topics/education
- www.p21.org/our-work/p21-framework

Future Research

Books/Articles
- Futures Thinking Playbook (Katie Bishop King)
- Die Entdeckung der Zukunft (Lucian Hölscher)
- Moderationsfibel Zukunftswerkstätten: Verstehen, Anleiten, Einsetzen (Beate Kuhnt, Norbert R. Müller)
- Zukunft 2050 – Wie wir schon heute die Zukunft erfinden (Ulrich Eberl)

Weblinks
- https://futurethinkers.org
- www.driversofchange.com/tools/doc
- https://jungk-bibliothek.org
- https://futurzwei.org
- www.wbgu.de

Design Thinking

Books / Articles
- Kreativität & Selbstvertrauen: Der Schlüssel zu Ihrem Kreativitätsbewusstsein (David Kelley, Thomas Kelley)
- Das Design Thinking Playbook (Michael Lewrick, Patrick Link, Larry Leifer)
- Design Thinking und Schule – Das Handbuch für den Schulalltag (Free download at: www.hopp-foundation.de)
- This is Service Design Doing (Marc Stickdorn, Adam Lawrence, Markus Hormess, Jakob Schneider)

Websites
https://designthinkingforeducators.com
http://toolbox.hyperisland.com
http://protobot.org
www.designkit.org
www.telekom-stiftung.de/design-thinkingschool

New Perspectives

Books / Articles
- Die Welt in 100 Jahren (Arthur Brehmer)
- Speculative Everything: Design, Fiction, and Social Dreaming (Anthony Dunne, Fiona Raby)
- Smarte Maschinen: Wie Künstliche Intelligenz unser Leben verändert (Ulrich Eberl)
- Die Physik der Zukunft: Unser Leben in 100 Jahren (Michio Kaku)
- Besser als die Wirklichkeit! (Jane McGonigal)
- Cradle to Cradle: Einfach intelligent produzieren (Michael Braungart, William McDonough)
- Und jetzt retten wir die Welt: Wie du die Veränderung wirst, die du dir wünschst (Marek Rohde, Ilona Koglin)
- Key competencies in sustainability: a reference framework for academic program development (Arnim Wiek, Lauren Withycombe, Charles R. Redman)
- Learning to transform the world: Key competencies in Education for Sustainable Development (Marco Rieckman)

9. Imprint

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The original Future Boxes are a product of Futurium and were developed in collaboration with the Education Innovation Lab.