A TEACHERS GUIDE TO FACTFULNESS
Ways of Working with the Book in the Classroom
INTRODUCTION

This is a teacher’s guide to working with *Factfulness*, by Hans Rosling, Anna Rosling Rönnlund, and Ola Rosling. You will find suggestions for how to use *Factfulness* in the classroom and how to structure your lesson plans, using the book as your starting point.

This teacher’s guide is mainly aimed at teachers within the social sciences, in secondary school (junior and senior high school), however, the materials provided here can also be used by teachers in other subjects and in other contexts, outside of education.

Factfulness outlines ten instincts that in different ways affect us and make us misunderstand how the world is developing. The book also shows us how we, by tempering these instincts, can replace an incorrect worldview with a fact-based worldview.

There are two parts to this teacher’s guide:
- The first part focuses on the introductory chapter of the book, with suggestions for how you can introduce *Factfulness* and its main ideas in the classroom.
- The second part outlines ways of working, including complete lesson plans, with one of the instincts discussed in Factfulness: the gap instinct.

We have chosen to focus on the gap instinct as it is one of the most basic of the ten instinct. In *Factfulness* it is described as a “mega misconception” because it has such a huge impact on how people misunderstand the world.
The way of working, here outlined for the gap instinct, is also applicable to the other instincts in *Factfulness*. This is a rough outline for how this work can be structured:

**Preparations**
- Read the relevant chapter. Summarize its content using the headlines "How does this instinct affect us?", "What is the world really like?", and "Ways to control this instinct".
- Consider how you might use the facts presented in the chapter and which materials, aside from the book, might be useful to work with (there are a lot of educational materials on the Gapminder website).

**Introduction**
- You should only complete the introduction tasks once. If you are working with several of the instincts, then you can repeat the/those questions from the test that are relevant to each instinct (see below).

**In Depth**
- Give students time to work with fact-based materials that assists them in gaining a more accurate understanding of the state of the world.

**Conclusion**
- Conclude with a session where you, as a group, reflect on the work you have carried out. What have we learned? How has this changed the way we view the world?

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<tr>
<th>Which question relates to which instinct?</th>
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<tr>
<td>The Gap Instinct</td>
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HOW DO WE VIEW THE WORLD, AND WHY?

In the introduction to Factfulness, the authors describe the main ideas behind the book. The chapter uses a test of 13 fact questions as a starting point to discuss why so many of us have an incorrect worldview and how facts and data can serve as a type of therapy.

Over the next few pages, the introduction to Factfulness is summarized to serve as a repetition for you (the teacher). After that, you will find tasks to help you introduce the book in the classroom.

Summary Of The Introduction

The Main Ideas Behind The Book

"Factfulness, like a healthy diet and regular exercise, can and should become part of your daily life. Start to practice it, and you will be able to replace your overdramatic worldview with a worldview based on facts." These are the words of the authors of Factfulness (p. 16), and they introduce the main ideas behind the book:

- Many people around the world have an overdramatic worldview. This means that we think that the world is more frightening, violent and hopeless than it really is. This worldview is stressful and incorrect.
- Though practice, by accessing data and by using simple strategies, we can replace the overdramatic worldview with a fact-based worldview. This worldview enables us to make better and wiser decisions, it makes us more aware of real dangers and possibilities, and it helps us to stress less about the wrong things.

The overdramatic worldview is very widespread. This has been demonstrated by Hans Rosling and the Gapminder Foundation (founded in 2005, by Hans Rosling, Anna Rosling Rönnlund, and Ola Rosling). For many years, they have posed people questions on various topics, ranging from poverty and wealth, to education, health and gender differences. The results of these tests have been discouraging: ”Everyone seems to get the world devastatingly wrong”, concludes the authors (p. 9).

Why Are So Many People Wrong About The World?

Why are so many people not realizing that the world, step-by-step and year-by-year, is actually improving? Why are so many of us prone to misinterpret facts and to draw faulty conclusions?
The answer, according to the authors, is related to how our brain functions: We are equipped with instincts that were helpful to our ancestors, who lived as hunters and gatherers, but that make people in the modern world jump to conclusions and identify non-existent dangers.

Summarizing the Ten Instincts

The ten instincts discussed in *Factfulness* are:

1. **The Gap Instinct**, which makes us divide things into two groups. This instinct fuels the misconception that the countries in the world can be divided into rich and poor, with a gap between the two groups. In reality, most countries are in the middle.

2. **The Negativity Instinct**, which makes us take more notice of the bad than of the good. This instinct fuels the misconception that the world is steadily deteriorating, when it is in fact improving.

3. **The Straight Line Instinct**, which makes us assume that lines in graphs are straight. This instinct fuels the misconception that the world's population is just increasing, and will continue to increase if nothing drastic is done. In fact, the world's population is increasing a lot, but the rate of increase has already begun to slow down, and the line in the graph will almost certainly be horizontal as we approach the end of this century.

4. **The Fear Instinct**, which makes us focus our attention on dramatic dangers and overlook those things that pose the biggest risk. This instinct fuels the misconception that the world is more frightening than it really is.

5. **The Size Instinct**, which makes us misjudge the proportions or sizes of certain things. This instinct makes us systematically underestimate the progress that has taken place in the world.

6. **The Generalization Instinct**, which makes us generalize incorrectly. It is impossible to avoid generalizations, but incorrect generalizations make us clump things together, like people and countries, that are actually very different.

7. **The Destiny Instinct**, which gives us the impression that innate qualities determine the fate of people as well as countries. This instinct fuels the misconception that societies and cultures are not in a constant state of change, and it makes us mistake slow rates of change for no change at all.

8. **The Single Perspective Instinct**, which concerns our love of simple ideas and attracts us to simple explanations and solutions. As a result of this instinct we often misunderstand the world and become blind to information that does not fit into our perspective.

9. **The Blame Instinct**, which makes us search for a culprit when something bad happens and a hero when something good happens. This instinct blocks our analytical skills and makes us simplify the world instead of searching for alternative explanations.

10. **The Urgency Instinct**, which gives us a sense of urgency—“now or never!”—and makes us want to act immediately (while we seem to lack the instinct to take long-term risk seriously). This instinct impedes our ability for critical thinking when we face complex problems.
LESSON PLAN:
INTRODUCE THE BOOK TO THE CLASS

This lesson plan consists of three interconnected tasks, which are meant to serve as an introduction to your work with the book, in the classroom.

**Preparation:** Read the introduction to *Factfulness*.
**Materials:** Computers or tablets.
**Duration:** One lesson.

Factfulness
Introduce the book and discuss the term, “factfulness”:

a) Write “Factfulness” on the board. How do the students react to the term? What do they associate the term with?

b) Explain that the term is the title of a book, as well as a concept which describes a better way to use data and information to improve our understanding of the world. The concept was developed by Hans Rosling, Anna Rosling Rönnlund, and Ola Rosling, the co-authors of the book.

The Students’ Knowledge
Describe how, for many years, Hans Rosling travelled around the world giving lectures. At his lectures he posed questions to the audience in order to test their knowledge about the world. The students will now get a chance to answer some questions about the development of the world.

a) Give the students the test from *Factfulness* (pp. 3–5) to complete. Use handout 1.
b) Give students time to discuss and compare their answers in smaller groups.
c) Run through the correct answers. What are the students’ thoughts about the answers? Which answers are the most surprising?
d) If many of the students have given incorrect answers it might be a good idea to tell them that they are in good company—most of the thousands of people who have answered these questions have given incorrect answers.
Optical Illusions and Global Illusions

After the test, discuss why so many people might be giving incorrect answers to these questions, i.e. why do so many people have an incorrect understanding of the world?

a) What do the students think might be the reasons?
b) Present the main ideas from the book’s introduction. Explain concepts such as the over-dramatic worldview, the fact-based worldview, and the instincts.
c) Complete the exercise “Optical Illusions—Global Illusions” (handout 2) and comment on it using the ideas presented in the book (pp. 14–15).
d) Give students time to discuss the potential danger of so many people having an incorrect understanding of the world. Ask each group to write down some thoughts to present to the other students. Why is it so important to have a fact-based worldview? (Factfulness, p. 15 and 17.)
HANDOUT 1

Test Yourself

1. In all low income countries across the world today, how many girls finish primary school?
   □ A: 20%
   □ B: 40%
   □ C: 60%

2. Where does the majority of the world population live?
   □ A: Low income countries
   □ B: Middle income countries
   □ C: High income countries

3. In the last 20 years the proportion of people living in extreme poverty, worldwide, has...?
   □ A: Almost doubled
   □ B: Remained more or less the same
   □ C: Almost halved

4. What is the life expectancy of the world population?
   □ A: 50 years
   □ B: 60 years
   □ C: 70 years

5. There are two billion children in the world today, aged 0 to 15 years old. How many children will there be in the year 2100 according to the United Nations?
   □ A: 4 billion
   □ B: 3 billion
   □ C: 2 billion

6. The United Nations predicts that by 2100 the world population will have increased by another 4 billion people. What is the main reason?
   □ A: There will be more children (below age 15)
   □ B: There will be more adults (age 15 to 74)
   □ C: There will be more very old people (above age 75)

7. How did the number of deaths per year from natural disasters change over the last hundred years?
   □ A: More than doubled
   □ B: Remained more or less the same
   □ C: Decreased to less than half
8. There are roughly seven billion people in the world today. Which map shows best where they live? (Each figure represents 1 billion people.)

A B C

9. How many of the world’s 1-year-old children today have been vaccinated against some disease?

☐ A: 20%
☐ B: 50%
☐ C: 80%

10. Worldwide, 30 year old men have spent 10 years in school, on average. How many years have women of the same age spent in school?

☐ A: 9 years
☐ B: 6 years
☐ C: 3 years

11. Tigers, Giant Pandas and Black Rhinos were listed as threatened species in 1996. Since then, have any of these species become more critically endangered?

☐ A: None of them
☐ B: One of them
☐ C: Two of them

12. How many people in the world have some access to electricity?

☐ A: 20%
☐ B: 50%
☐ C: 80%

13. Global climate experts believe that, over the next 100 years, the average temperature will:

☐ A: Get warmer
☐ B: Remain stable
☐ C: Get colder
HANDOUT 2

Optical Illusions—Global Illusions

Look at the two horizontal lines below. Which line is the longest?
Chapter 1 of *Factfulness* outlines the gap instinct and the widespread mega misconception that the world can be divided into rich countries and poor countries. The following pages contain a summary of the chapter, to help you (the teacher) remember its content. After the summary, you will find suggestions for ways of working with the gap instinct in class, with *Factfulness* and the Gapminder website as your starting points.

**Chapter Summary**

**How Does The Instinct Affect Us?**

The gap instinct makes us prone to divide things into two groups and it fuels the misconception that the world can be divided into two types of countries—poor and rich, developing countries and developed countries—and that there is a huge gap between the two groups.

When Gapminder asked people around the world how large the proportion of the world’s population living in low-income countries is, the majority answered, “50 percent or more”. The correct answer is 9 percent.

This shows that many people believe that there is a large gap between the rich and the poor, and that the majority of people in the world are stuck either in a life of misery or in a life of wealth.

**What the World is Really Like**

The idea of a world divided into two groups is incorrect. There is no gap. Most countries belong in the middle, where we assume that the gap is. The world has gone through some radical changes since the 1960s and this is true for almost all aspects of human life, from the sizes of families and the child mortality rate, to the availability of electricity and education.

Instead of dividing the world into two groups, it is more correct to divide the world’s population into four groups, based on people’s income. The four income levels are:

- **Level 1**: At this level, people make less than 2 dollars a day. Approximately 1 billion people belong to this level.

- **Level 2**: At this level, people make between 2 and 8 dollars a day. Approximately 3 billion people belong to this level.
• **Level 3:** At this level, people make between 8 and 32 dollars a day. Approximately 1 billion people belong to this level.

• **Level 4:** At this level, people make more than 32 dollars a day. Approximately 1 billion people belong to this level.

200 years ago, around 80 percent of the world’s population belonged to level 1, living in extreme poverty. Today, this figure is 9 percent. Instead, most people now belong to the two middle-income levels. Their most urgent needs are met (i.e. they have somewhere to live and access to food, water, electricity, toilets, education, and basic health care).

**Ways To Control The Instinct**

One way to control the gap instinct is to identify the majority. We also need to remember that “the view from up here” often distorts what we see. For people at income level 4 it is easy to overlook the huge differences in quality of life between income levels 1 and 2.

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**The Instinct:**
The world is divided in two. The world’s countries can be categorized as either poor and rich countries.

**The Reality:**
Instead of being divided in two groups, there is an overlapping spread. Most countries are in the middle and 75 percent of the world’s population live in middle-income countries.

**Ways To Control The Instinct:**
Look for the majority. Beware of the view from up here.
LESSON PLAN FOR WORKING WITH THE GAP INSTINCT

Lesson plans are based on the model described on p. x. First, there is an introduction, then we work more in depth, with two assignments, and then we conclude our work, by reflecting on what we have learned.

Preparations: Read chapter 1 of Factfulness. Familiarize yourself with Dollar Street at gapminder.org. Print the handout from the teacher’s guide (two for each group).

Materials: Computers or tablets.

Duration: 2–4 lessons.

Introduction: Revisit Fact Question 1 And 2

Revisit fact questions 1 and 2, from the test in the book, which the students will already have given their answers to (teacher’s guide, pp. x–x). Run through the students’ answers, as well as the correct answers.

Task 1: The Four Income Levels

Revise the introduction: Many people believe that the world can be divided into two groups, but this assumption is incorrect. This is called The Gap Instinct. Give students time to come up with more examples of instances where we divide things into two separate groups or categories (Factfulness, p. 38).

Briefly describe the four income levels, page 34–37 and explain how Dollar Street works (see next page), but do not tell them how many people belong to each income level. Then complete the task.

Step-By-Step Way of Working

a) Divide the class into groups. Give each group a Dollar Street and seven figures (handouts 3 and 4). Explain that each figure represents approximately one billion people.

b) Where on Dollar Street do the students believe that they live? Ask them to mark this location with a pen. Tell students that most people in Sweden belong to income level 4, but that a low income in Sweden (relative poverty) is a middle income on the global income scale, i.e. on level 3.

c) If possible, show students the “income mountain diagram” on the Gapminder website. This illustrates the income levels in Sweden. Use this link: gapminder.org/tools/#$state$marker$select@$geo=swe;;;;&chart-type=mountain
d) When students know where on Dollar Street they live, they should consider where the rest of the world’s population lives. Tell the students that approximately one billion people belong to level 1; where are the other six billion people? Ask students to place one figure on level 1 and then divide the other six figures over the other levels, to represent how they think people around the world live.

Follow Up
a) Let each group present to the class where they have placed their figures.
b) Show students the real situation by placing your own set of figures in the correct locations.

c) If you have time you can show the class a YouTube-clip of Hans Rosling explaining the development of the world for the last two hundred years. In the clip he discusses the income levels: youtube.com/watch?v=b7f9MUEqqEQ
[eller översättarens förslag: youtube.com/watch?v=jbkSRLYSsojo]

INFO!

Dollar Street
Dollar Street was developed by Anna Rosling Rönnlund and is described in Factfulness: “Imagine all the homes in the world lined up on one long street, sorted by income. The poorest live at the left end of the street and the richest live at the right end. Everybody else? Of course, you know it by now: most people live somewhere in the middle. Your house number on this street represents your income. Your neighbors on Dollar Street are people from all over the world with the same income as you.” (p. 154)

TOP TIP!

Hans Rosling on Danish TV
In a passage in Factfulness (p. 28) Hans Rosling describes a now famous interview with a Danish reporter, in 2015, where Rosling challenges the misconception that the world can be divided into two groups. If possible, read this passage out loud to your students and look at the interview, available on YouTube, and give students time to reflect on how Rosling challenges the worldview presented by the reporter. What is he trying to demonstrate by using the pieces of fruit on the table.
Task 2: Life on Dollar Street

When you belong to income level 4 it might be difficult to spot the differences between people’s quality of life at the lower income levels. Everyone can seem equally poor. Discuss this "view from up here" (Factfulness, pp. 44–45) and use a concrete example to illustrate the difference between life at the different income levels (pp. 155–158 + the last page).

You might choose to focus on the issue of water. At level 1, people often lack access to clean water and they spend many hours each day getting water, and this water might still make them ill. At level 2, people have access to clean water, but it might be far away and they can spend many hours each day getting it. At level 3, people have access to clean water near their homes or in their homes. At level 4, people have access to clean water in their homes and this water is adapted for different uses (drinking water, cleaning, hot and cold water).

Tell your students that they will get the chance to learn more about life at all four income levels. Then complete the task on the following page where students are asked to work with the Gapminder website. They will find images which document how hundreds of families around the world live.

**TOP TIP!**

Anna Rosling Rönnlund’s TED Talk

In her TED Talk from 2017, Anna Rosling Rönnlund describes Dollar Street. The title of the speech is “Everyone Lives on Dollar Street” and it can be accessed via gapminder.org. The speech is nearly 12 minutes long, but if you want your class to see a shorter extract of the speech you can start 6 minutes and 37 seconds into the clip. Towards the end of the speech, Rosling Rönnlund shows photos of different families around the world and she stresses how crucial it is to make comparisons.
Step-by-Step Way of Working

a) Access gapminder.org and click on “Dollar Street”. Select “Quick Guide” in the menu on the right hand side and go through it with the whole class.

b) Split the class into groups. Each group works with two families at the same income level. As a teacher you might want to assign the families yourself, so that all income levels are equally represented.

c) Distribute the handouts (handout 5) and give students time to work through the tasks.

d) Let the groups present their families to each other in the following way:
   i. The groups that have worked with families at income level 1 and 4 begins.
   ii. Give the class some time to reflect on the differences between the richest and the poorest.
   iii. Continue the presentations with the groups that have worked with families at income level 2 and 3.
   iv. Give the class some time to reflect on life at income level 2 and 3, i.e. in the middle, where most people expect the gap to be. Remind students that most people in the world belong to these two income levels.
   v. Finish up by asking the class to discuss similarities and differences between the families that they have worked with.

Follow-Up

As a follow-up to this task, you can introduce a discussion from chapter 6, in Factfulness, about the generalization instinct. Dollar Street illustrates “the striking similarities between the lives of people living on the same income in different countries, and the huge differences in how people live within countries” (p. 155). Families at level 4, for example, have very similar bedrooms, kitchens, and living rooms. In the same way, families at level 2 store and cook food in similar ways, no matter where they are in the world.

This means that the families on Dollar Street are not representative of what life is like in their home countries, but instead of how life is like at the different income levels.

One way of illustrating this might be to click on a country in South Africa, or on China or India, on Dollar Street, to show families at different income levels in one country, or to click on “Africa” to demonstrate that there are families at all levels of development in the African continent (Factfulness, pp. 159–160).

Conclusion

Conclude the work on this topic with a general discussion on how students reacted to the tasks and to what extent the think that their understanding of people’s everyday lives, at different income levels, have improved.
HANDOUT 5

Task for Dollar Street

Family:

________________________________________________________________________

Where does the family live:

________________________________________________________________________

Monthly income:

________________________________________________________________________

Income level:

________________________________________________________________________

Brief description of the family:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

How do they make a living:

________________________________________________________________________

________________________________________________________________________

What are their challenges:

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________________________________________________________________________
What do they dream of:

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Choose a few photos of the family home and write a brief commentary for each photo:

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Choose a few photos illustrating the family’s access to water. Write a brief commentary for each photo:

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________________________________________________________________________
Choose a photo which illustrates what the family eats. Write a brief commentary for the photo:

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Choose a photo which illustrates what the children's toys look like. Write a short commentary for the photo:

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Which is this family's most beloved belonging. If there is no photo illustrating this you can choose a photo of a personal belonging that you think is important to this family. Write a brief commentary to the photo:

______________________________________________________________________________

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This teacher’s guide refers to freely available materials from Gapminder (www.gapminder.org) and is produced by Carl-Johan Markstedt (author) in collaboration with Mikael Arevius and Olof Gränström (educator at Gapminder).

If you want to learn more about our teaching materials or book a workshop for your organization, please contact lectures@gapminder.org.