| Scene 01 – Introduction | |
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| Welcome.<br><br>Welcome to a planetarium, a place of wonders.<br><br>A place with a truly dark sky filled with thousands of glittering stars slowly sailing above your heads.<br><br>This is what we come here for...<br><br>Don’t you find it odd that we no longer expect such beauty in our daily lives?<br><br>Daily lives... That’s the thing. We humans are, after all, diurnal beings. We live our lives in the day – when there is plenty of light.<br><br>THIS is the kind of view we have grown accustomed to at night… when there is plenty of light, too.<br><br>To many, this does not feel unnatural anymore… | |

| Scene 02 – Too much light at night | |
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| We have an infinite supply of light during the day. We live, work, eat and enjoy our lives in the sunlight.<br><br>But we do not switch off as soon as the Sun sets. We need to, and want to be active at night, too. And for that, we need artificial light.<br><br>Nowadays, this is no technological challenge to us. Mankind has been gradually lighting up the planet and has effectively driven away the dark of night. Light pollution has become a constant.<br><br>Many have already forgotten what the night used to look like. How dark it used to, and should, be.<br><br>What if we moved the Earth back in time? Just to remind ourselves. A few hundred years might be enough to do the trick…<br><br>Now, the night is finally as dark as it gets...<br><br>Or is it…<br><br>Because, astrophysically speaking, there is no such thing as absolute darkness... For that, we would need to turn off the whole Universe. | |

| Scene 03 – Darkness | |
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| How do you feel? Is it weird? Frightening?<br><br>Maybe just a bit uncomfortable.<br><br>We aren't used to this anymore.<br><br>Darkness has become a symbol of fear and evil… It makes us feel uneasy.<br>But don’t worry!<br>There’s no need to fear the dark.<br><br>Even now, there is a lot of light around you.<br><br>It’s just light you cannot see… | |

| **Scene 04 – There is no such thing as absolute darkness** | |
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| Our eyes detect visible light – which is a very small portion of the whole electromagnetic radiation spectrum.<br><br>It might come as a surprise, but the radio waves carrying your favourite music, Wi-Fi connecting your phones to the Internet and even X-rays revealing fractures in your bones are actually all of the same nature.<br><br>They are all electromagnetic radiation, just at different wavelengths.<br><br>If we were able to see more than just the narrow band of visible light, the world around us would suddenly light up!<br><br>And we're not talking only about appliances. The people sitting around you radiate too!<br><br>Everything in the universe gives off some electromagnetic radiation…<br><br>You see? Even the darkest room is filled with invisible light. | |

| Scene 05 – The evolution of artificial light | |
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| If you were to ask why is it that mammals' eyes have such a specific sensitivity – we can thank our Sun for that. Its radiation peaks within the wavelength range we call visible light.<br><br>So, it's just evolution adapting organisms to the environment – including us, humans.<br><br>Sunlight allowed our ancestors to see the world around them during the day, and at night, they first had to rely only on moonlight. Taming fire was a big revolutionary step – suddenly, even the darkest places could be illuminated even in the dead of night.<br><br>It did not take long until people were carrying torches, then small oil lamps and candles that could burn for hours.<br><br>The biggest game changer was the discovery of electricity. This allowed light sources to shine almost indefinitely with unprecedented brightness.<br><br>Light filled our lives. We fell in love with it so much that it has become omnipresent. | |

| Scene 06 – The rhythm of life | |
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| There is no doubt that it has brought us many benefits, but have you ever wondered if there could be a downside to light?<br><br>Already in the 18th century, a French scientist noticed that a plant called mimosa folds its leaves every evening, only to unfold them again with the first rays of morning Sun. But the same thing kept happening when, as an experiment, he moved it to a dark place without windows, with a regularity of 24 hours.<br><br>For more than 200 million years, the living organisms on Earth have evolved with day and night changing in a precise rhythm. And this rhythm has left its imprint in our very biology. An imprint that has formed into an inner clock we call the circadian rhythm.<br><br>When the light hits our eyes, our body assumes it's daytime. During sunset, when the sunlight gets dimmer and, most importantly, redder, our body prepares itself for night rest and instructs the production of a very important hormone called melatonin. This hormone has been linked to improving sleep quality, supporting the immune system and acting as a powerful antioxidant, preventing certain types of cancer.<br><br>Unfortunately, the inner biological clock is not perfect, it can get disrupted by external factors. Imagine a situation when we sit at a table in the evening and use a bright lamp that shines like the midday Sun with a significant blue component in its light. Our body gets confused and melatonin production decreases. The same applies to the mimosa plant, whose circadian rhythm got gradually more and more misaligned during the experiment. | |

| Scene 07 – Ecosystem | |
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| Light pollution does not only affect us, humans.<br><br>More than half of all animal species are at least partially active at night. They use light to judge the right time to breed, forage and rest. Light serves them as an orientation aid – animals are either attracted to it or avoid it. Many of them have developed the ability for visual perception even at low light levels, such as the moonlight and the natural brightness of the sky.<br><br>When artificial light levels are disproportionate, insects, the base of the food chain, are drawn to light sources, where they circle around it until exhaustion. A room full of mosquitos caused by somebody not turning off a light is a familiar scene for everyone.<br><br>Migratory birds, guided by the light of the moon, the stars and the outlines of continents, may lose their ability to orient themselves and their flight becomes hazardously prolonged. And the behaviour of forest animals when they encounter the bright light of a car at night probably needs no further discussion.<br><br>And have you ever noticed the presence of leaves on the branches near streetlights long after the rest of the tree has shed them? That too is a result of light pollution.<br><br>We are a part of the ecosystem, we need to remember that. Because if one part of it suffers, the system as a whole suffers, too. | |

| Scene 08 – Proper lighting | |
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| But nobody can argue with the fact that we need light, even during the night. But do we need so much of it?<br><br>The issue with artificial lighting at night is often debated only in terms of quantity. While decreasing the amount is undoubtedly a good step – it is but the first of many.<br><br>Another one is to pick the right type of light, or the right colour temperature, to be more precise. In the evening, light sources with a significant blue component in their spectrum should be avoided because of its negative effect on our circadian rhythm. Therefore, when really needed, warm white light should be used after sunset.<br><br>Just as important is directing the light to where we actually need it. Street light fixtures should block any upward light because illuminating the heavens is not doing any good to anyone…<br><br>And if a cultural monument or a church really needs to be highlighted at night, professionals should be tasked with masking the lights to minimise light pollution.<br><br>The economical point of view is, all in all, quite simple. Decreasing the amount of unnecessary light goes hand in hand with decreasing costs and less waste of energy and natural resources..<br><br>When all aspects are considered, one finds out that much can be done to help preserve the natural order of things. And it often means just turning off a light you do not need. | |

| Scene 9 – The dark sky regions | |
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| However, the glare of densely populated areas is far reaching… and to experience a truly dark sky with your own eyes, you often need to travel far from civilization.<br><br>Luckily, not as far as you might think, but just taking a cab to the city outskirts is far from enough. You need to go a bit further. But it will be worth it!<br><br>A place to seek out is called a dark sky region. You might actually be surprised that there may even be some in your own country.<br><br>These regions strive to have as little light pollution as possible to restore the natural balance. If certain conditions are met, a region can even get certified as an official Dark Sky Preserve or Dark Sky Sanctuary by international associations. In some areas, the level of light pollution is even protected by local laws!<br><br>Areas like these are very important for professional astronomers, who need land-based observatories with conditions ideal for their research. Conditions that might even include low radio pollution!<br><br>The preserves are also often sought out by amateur astronomers to enjoy a proper observational night. However, they are not meant as a zoo that you visit to experience something rare. Their aim is to raise awareness of the importance of natural darkness. | |

| Scene 10 – The beauty of the dark | |
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| If you manage to visit a place, where the night sky is bright with stars instead of streetlamps and billboards, keep your phone in your pocket. Stay away from any disturbing light and let your vision adapt to the dark, as it can sometimes take up to 30 minutes – especially after being exposed to a bright light.<br><br>After a while, you will begin to see wonders. Not tens or hundreds of stars… thousands of them! And this is just the beginning. The dazzling band of the Milky Way stretching across the sky is a majestic and unforgettable sight, which we have lost in our light polluted cities… A sight, which inspired our ancestors to ask questions about who we are, where we came from and where we are going…<br><br>There are many wonders hidden in the sea of stars, visible only in the darkest of skies – like nebulae and star clusters or even other galaxies way beyond our own Milky Way! Looking out into a dark sky, we look back in time and discover our own story, our origins. Because the atoms of our bodies were once created in stars - the stars we are slowly erasing from the sky with light.<br><br>We are losing all of this. All this beauty has been exchanged for an everlasting day. | |

| Scene 11 – Bring the Night Back | |
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| Mankind is an amazing species. We have accomplished much in the relatively short time we have been roaming this planet.<br><br>Much that is good, but also much that isn't.<br><br>We have flooded the world around us with artificial light, tipping the scales of natural balance.<br><br>At first glance, this might not have seemed like such a big problem.<br><br>But we already know that time will prove us wrong.<br><br>It is up to us… Up to every SINGLE ONE of us to lend a hand in preserving the unique heritage of the dark night sky…<br><br>Everyone can help the cause.<br><br>One may just turn off a lamp they do not really need…<br><br>Another one can turn off those ads that only attract insects in the dark…<br><br>And one day, if we work together, we might bring the night back… | |

| **End credits** | |
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