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| Cornell Note taking  |

The film begins with an overhead view of a man and woman picnicking in a park at the [Chicago](https://en.wikipedia.org/wiki/Chicago) lakefront — a 1-meter (3.3 ft) overhead image of the figures on a blanket surrounded by food and books they brought with them,

The man sleeps, while the woman starts to read one of the books. **The viewpoint, zooms out** to a view 10 meters (33 ft) across (or 101 meters in [scientific notation](https://en.wikipedia.org/wiki/Scientific_notation)).

**The zoom-out** continues (at a rate of one power of ten per 10 seconds), to a view of 100 meters then 1 kilometer (3,300 ft) (where we see the entirety of Chicago), and so on, increasing the perspective and continuing to zoom out to a field of view of 1024 meters, or a field of view 100 million [light years](https://en.wikipedia.org/wiki/Light_year) across.

The camera then **zooms back in** at a rate of a power of ten per 2 seconds to the picnic, and then slows back down to its original rate into the man's hand, to views of **negative powers of ten**: 10 [centimeters](https://en.wikipedia.org/wiki/Centimeter) (10−1 meters), and so forth, revealing a [white blood cell](https://en.wikipedia.org/wiki/White_blood_cell) and zooming in on it—until the camera comes to [quarks](https://en.wikipedia.org/wiki/Quark) in a [proton](https://en.wikipedia.org/wiki/Proton) of a [carbon](https://en.wikipedia.org/wiki/Carbon) [atom](https://en.wikipedia.org/wiki/Atom) at 10−16

 The film explores the concept of scale and the relative size of objects in the universe by zooming in and out from a picnic blanket in Chicago to the outer reaches of the cosmos.The key takeaway from "Powers of Ten" is the notion of perspective and the vast scale of the universe. It offers several important insights:

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| The film emphasizes how our perception of the world can change dramatically based on the scale at which we view it. Zooming in and out from the picnic blanket highlights the relative sizes of objects, from atoms to galaxies, and how our perspective can shift with each level of zoom. |

**Scale and Perspective:**

Powers of Ten" demonstrates the interconnectedness of the universe. It shows how the same physical laws and principles apply across different scales, from the microcosmic to the macrocosmic.

**Connectedness:** "

**Sense of Wonder:**

The film evokes a sense of wonder and awe about the vastness of the cosmos and the intricacies of the subatomic world. It encourages viewers to contemplate the mysteries of the universe.

**Educational Value:** "

Powers of Ten" is not only a work of art but also an educational tool. It can be used to teach concepts of scale, astronomy, and physics. It highlights the importance of science communication and visualization in helping people grasp complex ideas.

**Perspective Shift:** The film prompts viewers to reflect on their place in the universe and the significance of the Earth in the grand scheme of things. It encourages a shift in perspective and an appreciation of the beauty and complexity of the cosmos.

**Interdisciplinary Learning:** "Powers of Ten" demonstrates the intersection of art, science, and design. It underscores the value of interdisciplinary approaches to understanding and conveying complex concepts.

Overall, "Powers of Ten" serves as a reminder of the beauty and intricacy of the universe and encourages viewers to adopt a more expansive and interconnected view of the world. It's a valuable resource for educators and a source of inspiration for those interested in science, design, and visual storytelling.

CREDIBILITY:

The movie "Powers of Ten" was created by the acclaimed design and filmmaking duo, Charles and Ray Eames. Charles and Ray Eames are highly regarded for their contributions to the fields of design and filmmaking. They are known for their innovative work in design, furniture, and architectural contributions. Their ability to present complex ideas in an accessible and visually engaging manner demonstrates their expertise in visual storytelling and educational design.

CITATION (MLA):Eames, Charles and Ray. "Powers of Ten." Filmmakers. 1977. Film.

WHAT YOU ALREADY KNOW: Before watching "Powers of Ten," I already knew that the film explores the concept of scale and perspective by zooming in and out from a picnic blanket to the outer reaches of the cosmos. I was aware that it is a well-regarded educational film known for its unique approach to visualizing scale.

WHAT YOU WANT TO KNOW: I wanted to know about "Powers of Ten" were:

How the film has impacted the field of educational filmmaking.

The specific techniques and visual storytelling methods used in the film to convey the concept of scale.

The historical context in which the film was created and its significance in the realm of design and filmmaking.

DURING THE MOVIE: I took notes on the following key points:

The film's transition between different scales, from the macrocosmic to the microcosmic.

The use of a picnic blanket as a central point of reference for scale.

The innovative combination of live-action and animation to convey complex concepts.

The film's ability to make abstract scientific ideas accessible and visually engaging.

**SUMMARY:** The main claim or argument of "Powers of Ten" is to emphasize the concept of scale and perspective in a visually engaging and accessible manner. The film achieves this by using innovative visual storytelling methods, including zooming in and out from a picnic blanket, to illustrate the vast range of scales in the universe.