CHILDREN

by Lucy Kirkwood

Presented by George Worthington & Cameron Mowat

APRIL 15 -MAY 7, 2022

Directed by Betsy Rudelich Tucker

Sponsored by Tim McNamara & Timothy Read, Attorney at Law THE CHILDREN is presented by special arrangement with Dramatists Play Service, Inc, New York. Photo credit: Adobe #100750335, rasstock

LIVE ARTS

STUDY GUIDE

THE CHILDREN by Lucy Kirkwood April 15 - May 7, 2022 in the Founders Theater Directed by Betsy Rudelich Tucker

The play runs for approximately 95 minutes with no intermission.

"... one of the astonishments of 'THE CHILDREN' ... is that even though it is completely successful as an eco-thriller, bristling with chills and suspense and foreboding sound effects, denuclearization is not its subject." – *The New York Times*

"... strikes a fine balance between comedy and seriousness, public and private concerns, bringing a complex and compelling play to vibrant life." – The Arts Fuse

"... (Kirkwood) has written a genuinely disturbing play: one not simply about nuclear power but about the heavy price we may pay in the future for the profligacy of the present. Whether you are a parent or not, the play leaves you an abundance of ideas on which to ruminate." —*The Guardian*

"Lucy Kirkwood's 'THE CHILDREN' is a captivating masterpiece of small-cast theater that's actually about the stage that is our planet. Perhaps its most urgent and disquieting aspect is the way its three very intelligent characters come to realize what they cannot know about what they have done. This is a play whose see-by date is right now." – DC Metro Theater Arts

Study Guide compiled for Live Arts by Education Director Ti Ames



Promo photo by Will Kerner featuring Kat Maybury as HAZEL, David Minton as ROBIN, and Jane McDonald as ROSE

Study Guide | Table of Contents

Plot Summary	5
Synopsis	5
Setting	6
Character Descriptions	6
Playwright Bio	7
Understanding Climate Change	9
A Brief History of the Fukushima Nuclear Disaster	10
Further Reading and Community Resources	14
Talkback Information	15
Climate Conversation Information	15
Works Cited	17

Study Guide | Table of Contents (QR)

Plot Summary

<u>Synopsis</u>

Setting

Character Descriptions

Playwright Bio

Understanding Climate Change

A Brief History of the Fukushima Nuclear Disaster

Further Reading and Community Resources

Talkback Information

Climate Conversation Information

Works Cited



Plot Summary

Named one of the greatest theatrical works since 2000 by The Guardian, THE CHILDREN is set in an all-too-recognizable future. Two retired nuclear scientists, Hazel and Robin, have been trying to sustain a normal life in an isolated English coastal cottage, even though they're living only a few miles outside an environmental disaster "exclusion zone." Former colleague Rose has suddenly reappeared, uninvited, after 38 years. As the drama unspools, the audience learns of their intertwined past, and the shocking reason for Rose's visit. Lucy Kirkwood's pressure-cooker of a play demands that we consider our generational and social responsibilities, and the reparations we may owe to those who follow.

Synopsis

In a small cottage on the British coast, Hazel makes a modest life for herself and her husband Robin in the aftermath of a natural disaster that's led to the meltdown of a nuclear reactor at a power plant. Hazel and Robin are retired nuclear physicists, having helped to open the plant in the 1970s. Now, ensconced in their vacation cabin while waiting for the government to clear their return to their farmhouse in the current "exclusion zone," Hazel follows the rules, stays occupied, and is waiting it out. So she is not expecting a visit from Rose, a former colleague she hasn't seen in 38 years and one whom she thought dead. Not from the nuclear meltdown, mind you: the rumor was that she fell ill over in America, got better, and then committed suicide. The two 60-something women talk children (Rose has none; Hazel has four children and three grandchildren), career (Rose went to the US; Hazel stuck around), and the actual events of the disaster (Hazel got a first-hand view).

But as they're catching up, Hazel notices that Rose is unnaturally at ease in this vacation cottage, pulling out a hidden footstool, snagging a glass from the cabinets without breaking stride. Only Hazel and Robin have used this cottage for years, and Robin hasn't seen Rose for years either, has he? Robin spends his days back on their property within the exclusion zone, tending to the cows and packing a Geiger counter. He returns for dinner, and Hazel confronts her husband and old friend about their perhaps not-so-distant past. But Rose has come with a more urgent and unusual request, one that will change each of their lives.

Setting

Where: A small cottage on the East coast of England When: A summer's evening

Character Descriptions

ROSE: Retired nuclear engineer; reappears after 38 years HAZEL: Retired nuclear engineer; married to Robin ROBIN: Retired nuclear engineer; married to Hazel

"All in their sixties"



Rehearsal Photo by Will Kerner featuring Jane McDonald as ROSE and David Minton as ROBIN

Playwright Bio

Lucy Kirkwood is an acclaimed playwright and screenwriter. In 2009, Lucy's play *It Felt Empty When the Heart Went at First But It Is Alright Now* was produced by Clean Break Theatre Company at the Arcola Theatre. The play was nominated for an Evening Standard Award for Best Newcomer and made Lucy joint winner of the 2010 John Whiting Award. NSFW premiered at the Royal Court Theatre in 2012, starring Janie Dee and Julian Barratt. *Chimerica* premiered at the Almeida Theatre in 2013 and subsequently transferred to the West End, earning Best New Play at the 2014 Olivier and Evening Standard Awards, as well as the Critics Circle Award and the Susan Smith Blackburn Prize. Recent work includes *Mosquitos* (presented by special arrangement with Manhattan Theatre Club), which opened at the National Theatre, London, in 2016. THE CHILDREN, which premiered at the Royal Court Theatre, London, in 2016. THE CHILDREN opened on Broadway in December 2017. Lucy also writes for screen: She has written for "Skins"

(Company Pictures); created and wrote "The Smoke" (Kudos/Sky 1); wrote and directed the short film "The Briny"; and is developing projects with Raw TV, Cowboy Films, Clio Barnard, and Lenny Abrahamson. Her new six-part season "Adult Material" (Tiger Aspect Productions) and the mini-series of her play *Chimerica* (Playground Productions) have both recently been greenlit.



From The New York Times 2017:

"I am frightened, as we all are, about things we can't control. Often drama comes out of people in moments they've lost control of. It's very interesting to watch someone try and cope with what the world is throwing at them I'd been trying for a very long time to find a way to write about climate change. And I wanted to make it driven by emotion rather than intellect. Then the events of Fukushima happened, the terrible disaster there. There was a retired workforce that volunteered to go back to clear up the plant there. And apparently the entire country sort of voluntarily monitored their own

energy usage. They managed to bring down their national energy usage just because everyone was diligent and considerate and thought about themselves as part of something bigger.

I find the idea of Britain doing that completely unthinkable. What we're sort of battling is individualism, because you simply cannot deal with a lot of the things that we're going to have to be dealing with in the next 50 to 100 years if you think about yourself as an individual, if countries think about themselves as individual countries. They're going to be global issues."

From Sloan Science and Film 2018:

"What I became interested in was how lay people interact with science. With THE CHILDREN I was thinking [about how] even scientists are people who have lovers, and husbands, and wives, and children. I was much more interested in the domestic, psychological, romantic, and philosophical aspects of those people rather than necessarily their professions, although their professions are where their power lies. I'm quite interested in science as power."

Understanding Climate Change

"Climate change refers to long-term shifts in temperatures and weather patterns.

These shifts may be natural, such as through variations in the solar cycle. But since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil and gas.

Burning fossil fuels generates greenhouse gas emissions that act like a blanket wrapped around the Earth, trapping the sun's heat and raising temperatures.

Examples of greenhouse gas emissions that are causing climate change include carbon dioxide and methane. These come from using gasoline for driving a car or coal for heating a building, for example. Clearing land and forests can also release



Total U.S. Greenhouse Gas Emissions

by Economic Sector in 2019

carbon dioxide. Landfills for garbage are a major source of methane emissions. Energy, industry, transport, buildings, agriculture, and land use are among the main emitters.

U.S. Environmental Protection Agency (2021). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019

And emissions continue to rise. As a result, the Earth is now about 1.1°C warmer (33.98 °F) than it was in the late 1800s. The last decade (2011-2020) was the warmest on record. Many people think climate change mainly means warmer temperatures. But temperature rise is only the beginning of the story. Because the Earth is a system where everything is connected, changes in one area can influence changes in all others.

The consequences of climate change now include, among others, intense droughts, water scarcity, severe fires, rising sea levels, flooding, melting polar ice, catastrophic storms, and declining biodiversity."

For more information on climate change, please visit: <u>https://www.un.org/en/climatechange/what-is-climate-change</u>.

A Brief History of the Fukushima Nuclear Disaster

Lucy Kirkwood has often spoken about how THE CHILDREN was inspired by the nuclear events at the Fukushima Daiichi Nuclear Power Plant in Ōkuma, Fukushima, Japan. On March 11, 2011, a major earthquake hit Fukushima. The earthquake, also known as <u>The Great East Japan Earthquake</u>, was "so powerful that Japan moved 'a few meters east' and the coastline subsided half a meter (WNA). Following this earthquake, a 15-meter (~9 mile high) tsunami hit the coast, and, after damaging structures and causing many deaths, disabled power supply and caused the cooling of the three Fukushima Daiichi reactors, causing a severe nuclear accident."

After an earthquake, "<u>destructive local tsunamis are possible near the epicenter</u>, <u>and significant sea level changes and damage might occur in a broader region</u>" if the earthquake has a magnitude of 7.9 or greater. The Great East Japan Earthquake had a magnitude of 9, so its effects were incredibly fatal.

The tsunami was so powerful that it "inundated about 560 km2 (~348 miles) and resulted in a human death toll of about 19,500 and much damage to coastal ports

and towns, with over a million buildings destroyed or partly collapsed." According to the <u>World Nuclear Association</u>, the main purpose of the Fukushima nuclear reactors was to "prevent release of radioactive materials, particularly in contaminated water leaked from the three units." The tsunami halted this process, leaving thousands in the region vulnerable or displaced due to high levels of nuclear radiation. The Fukushima nuclear disaster is often compared to the 1986 Chernobyl Accident, when a nuclear reactor malfunctioned due to flawed design and operation error in Ukraine, exacerbated by "<u>Cold War isolation and the</u> <u>resulting lack of any safety culture</u>".

To this day, the events of The Great East Japan Earthquake and the tsunami that followed have had lasting effects on Japan as a country, as well as global understanding of seismic activity and nuclear radiation. For more information about the 2011 Fukushima nuclear disaster, please visit <u>https://world-nuclear.org/information-library/safety-and-security/safety-of-plants</u> <u>/fukushima-daiichi-accident.aspx</u> or <u>https://www.sustainabletheatre.org/narrative/children</u>.

To compare the Fukushima and Chernobyl nuclear disasters further, please visit the <u>Nuclear Energy Institute</u>.

Glossary, Cultural Context, & British Expressions

- **allotment**: a plot of land rented by an individual for growing vegetables or flowers
- Archimedes: a famous Greek mathematician known for his many discoveries like the pulley system and water displacement
- **Bangladesh**: A South Asian country east of India and just north of the Bay of Bengal
- **cagoule**: a lightweight, hooded, thigh-length waterproof jacket
- **caravan**: a (British) a vehicle equipped for living in, typically a trailer towed by a car and used when traveling for recreation
- **E** = mc²: Albert Einstein's theory of special relativity, explaining that mass and energy are the same physical entity

- exclusion zone: a territorial division established for case-specific purposes. These zones are created for control of populations for safety, crowd control, or military purposes, or as a border zone. They may be temporary or permanent. Large-scale geographic exclusion zones have been established after major disasters in which nuclear power plants went into meltdown
- **Geiger counter**: a device for measuring radioactivity by detecting and counting ionizing particles
- geneticist: a biologist who specializes in heredity and variation of organisms
- halitosis: medical term for bad breath
- **hedgerows**: a rough or mixed hedge of wild shrubs and occasional trees, typically bordering a road or field
- Heisenberg Principle: also known as the uncertainty principle in quantum mechanics which states that it is impossible to discern simultaneously and with high accuracy both the position and the momentum of a particle (such as an electron)
- **hoarder**: persistent difficulty discarding or parting with possessions because of a perceived need to save them. A person with hoarding disorder experiences distress at the thought of getting rid of the items.
- **j-cloth**: a light, absorbent, reusable cloth used for wiping household surfaces
- latch: a metal bar with a catch and lever used for fastening a door or gate
- **layman's terms**: the term derives from the 16th-century idiom "in plain English," meaning in clear, straightforward language; language that is clear and concise
- libido: sexual desire
- macerator: (sewage), machine that reduces solids to small pieces. Macerating toilets use a grinding or blending mechanism to reduce human waste to a slurry, which can then be moved by pumping.
- **necrophiliac**: someone with an obsession with and usually erotic interest in or stimulation by corpses
- **neutron**: an uncharged elementary particle that has a mass nearly equal to that of the proton and is present in all known atomic nuclei except the hydrogen nucleus
- **nuclear engineer**: researches and develops the processes, instruments, and systems used to derive benefits from nuclear energy and radiation

- **socialist**: someone who believes any of the economic and political theories advocating collective or governmental ownership and administration of the means of production and distribution of goods
- **slush fund**: a reserve of money used for illicit purposes, especially political bribery
- **Peperami**: a salami sausage snack manufactured by Jack Link's, a global leader in meat snacks. It is manufactured in Ansbach, Germany and sold in the United Kingdom and Ireland through independent retailers.
- pram: a four-wheeled carriage for a baby radiation
- radiation: energy that comes from a source and travels through space at the speed of light. Ionizing radiation can affect the atoms in living things, so it poses a health risk by damaging tissue and DNA in genes.
- radiation spike: a sharp increase of radiation
- **Red Nose Day**: an annual British fundraising campaign to end the cycle of child poverty and ensure a healthy future for all children
- **Russian roulette**: an act of bravado consisting of spinning the cylinder of a revolver loaded with one cartridge, pointing the muzzle at one's own head, and pulling the trigger
- **shingle**: a mass of small rounded pebbles
- **skol**: a drinking toast to good health (from Danish skaal bowl)
- Weimar: the unofficial name given to Germany in the interwar period from 1919 to 1933, between the defeat of Germany in the Great War in 1918 and Hitler's rise to power in 1933. During that time, Berlin became the intellectual and creative center of Europe, doing pioneering work in the modern movements of literature, theater, and the arts, and also in the fields of psychoanalysis, sociology, and science. Germany's economy and political affairs were suffering at the time, but cultural and intellectual life was flourishing



Rehearsal Photo by Will Kerner featuring David Minton as ROBIN, Kat Maybury as HAZEL, and Jane McDonald as ROSE

Further Reading and Community Resources

- ARTivism Virginia
- Charlottesville Appalachian Voices
- Chesapeake Climate Action Network
- Community Climate Collaborative
- Southern Environmental Law Center
- UVA Office of Sustainability
- Virginia State Climate Summaries 2022
- <u>350</u>

Talkback Information

The audience talkback for Live Arts' THE CHILDREN is scheduled for 9:00pm on Thursday, April 28, 2022 in Founders Theater (123 E. Water St., 3rd floor) with members of the cast and crew, facilitated by Education Director Ti Ames. You do not have to purchase a ticket to that night's show to attend the talkback. This program is provided free of charge to the Charlottesville community. Please email Education Director Ti Ames at <u>ti@livearts.org</u> with questions about the event.

Climate Conversation Information

In addition to the talkback, Live Arts will also host a conversation inspired by THE CHILDREN, hosted by Betsy Rudelich Tucker, director of THE CHILDREN, and Susan E. Evans, artistic director at Live Arts, and facilitated by Kay Leigh Ferguson, founder of ARTivism. This conversation will feature several community leaders and climate activists alongside Ms. Ferguson, including Susan Kruse, executive director at Community Climate Collaborative; Dr. Donal Day, a nuclear physicist at UVA, and Dr. James Groves, from the Department of Engineering at UVA. Together, these amazing panelists will discuss the intersections of art, artists, and activism related to climate change, the environment, and sustainability.

This conversation will take place on Sunday, May 1,2022 at Live Arts (123 E. Water St., 3rd floor) at 3:45pm, following the matinee performance of THE CHILDREN. It is free of charge to the Charlottesville community. You do not need to attend the performance to attend the conversation.

Dr. Donal Day is a research professor in experimental nuclear and particle physics at UVA. He specializes in the scattering of high energy particles from spin oriented nucleons (protons and neutrons) as well as efforts to disentangle the short distance (and violent) interactions of protons and neutrons in stable nuclei. He is a Fellow of the American Physical Society. He imagines a future based on renewable energy that will make atomic energy indefensible. He is a 40+ year organic gardener/farmer and a former marathoner. His activism led him to take on two (losing) political campaigns — the House of Delegates in 1982 with the Citizens' Party and an independent run for the Virginia State Senate in 1995. Kay Leigh Ferguson bolted out of semi-retirement to found ARTivism Virginia in early 2017. Overeducated as a writer, often employed as an actor and as an activist, she has taught writing, theater, and organizing in more and weirder settings than can be named here. Activist teeth cut in early '80s with Women's Action for Nuclear Disarmament. 20 years work with Live Arts theater as janitor, board officer, fundraiser, actor, director, teacher, and founder of our education program. Only now can she see that the uniting thread is and was always artivism. Approaching her seventh decade, she is glad to finally know what she grew up to be.

Dr. James Groves is an associate professor in the Department of Engineering & Society at UVA, a licensed professional engineer in the Commonwealth of Virginia, and a longtime resident of central Virginia. He has previously served as director of distance learning and associate dean in UVA's engineering school. Today, his university focus is upon undergraduate instruction in sustainability and design, including recent courses Introduction to Sustainable Energy Systems and The Global Context of Clean Energy Materials. In the community, he serves as a board member for CVille100, a local coalition working to advance climate action in Charlottesville-Albemarle. When not working, he enjoys the mountains in the region and is currently section hiking the Appalachian Trail with his son.

Susan Kruse has advocated for environmental protection and justice for more than 25 years. She joined the Community Climate Collaborative (C3) as executive director in 2019. She is serving a three-year term on Virginia's Clean Energy Advisory Board after her appointment by Governor Ralph Northam in 2019 and was named in Virginia Business Magazine's list of 100 people to meet in 2022 as an Impact Maker in Virginia. Susan resides in the City of Charlottesville with her husband Mike and their two boys, Evan and Sebastian.

Works Cited

English Theatre Frankfurt Education Mini-Pack | THE CHILDREN by Lucy Kirkwood

United Nations | What is Climate Change?

<u>United States Environmental Protection Agency | Sources of Greenhouse Gas</u> <u>Emissions</u>