BYkids

SCHOOL GUIDE:

SEEDS OF LIFE

ABOUT THIS GUIDE

This BYkids School Guide is designed to help you as an educator expand your students' use of this film from passive watching to active, deeply personalized learning. Included are three sample Pathways with questions for discussion, reflection or as writing prompts. PBL activities follow (problem and project-based learning). Use these with individual kids, cooperative learning groups or whole class(es). Each Pathway has an alignment to ELA, Mathematics, and Science curriculum standards plus the CASEL 5 SEL competencies. Please feel free to customize the activities for your students' journeys through the film's themes and content in different ways. For more information, see our Take Action guides, Talk with Your Kids, and other resources in the "For Educators" tab of the BYkids site: bykids.org/for-teachers.

BYkids believes that lived experience and story sharing have a vital role in educating the whole child, preparing them for and inspiring them to be global citizens who see our shared humanity. As you and your students use our BYkids activities, we'd love for you to share your discoveries and ideas with us at education@bykids.org.

ABOUT THE FILM

Our environment—Mother Earth and biodiversity—is inextricably connected to our ongoing existence. That's the takeaway message of 14-year-old Diya Payal's film, SEEDS OF LIFE. This spirituality and way of living infuse the work on the fields tended on her grandparents' farm, located in the foothills of the Himalayas in India. Diya tells the story of generations of farmers who live off the land and sell the surplus crops they grow, and the importance of preserving and growing indigenous organic seeds versus industrially produced and genetically modified seeds.

Industrial-scale farming can lead to biodiversity loss, proliferation of invasive species and global warming, which all endanger essential pollinators such as bees, the health of the soil, water systems and local environments. Diya's film takes us to the Navdanya Biodiversity Farm, an initiative to promote ecological farming and fair trade, and to one of its community seed banks. There, seeds of local varieties of staples like rice, millet and barley—adaptable to drought, flooding or other climate disasters—are preserved and distributed to the community.

SEEDS OF LIFE reinforces the need to educate globally about ecological farming and food practices, with critical lessons for the welfare of humankind. It also illustrates the connections of family and tradition, and that we are all part of nature.

"Food and farming is deeply connected to our spiritual and cultural relationship with the natural world. I wanted to share this idea with other young people, in the hope that we will choose to coexist in harmony with nature for the future of the planet and humanity, too." —Diya Payal

ABOUT DIYA'S MENTOR—CAMILLA BECKET

As co-owner of Becket Films, Camilla Becket has produced several award-winning documentaries, including *Sons of Africa*, about the sons of two of East Africa's most renowned heads of state, who scaled Kilimanjaro together on an historic peace climb after living through a brutal war between their nations. Camilla also co-produced a series about ecologically threatened water bodies around the world, which featured scientists, environmentalists and religious leaders. She profiled the eco-activist Dr. Vandana Shiva in her documentary *The Seeds of Vandana Shiva*.

"It was so rewarding to witness Diya's growing interest in filmmaking, evolving clarity around the story she wanted to tell and emerging confidence in her own voice. While Diya learned things from me, I also learned things from her. She and her community live in a way we can all aspire to and could achieve in our own way. It's possible to live a modern life with a small ecological footprint and with respect to community, ancestry and the natural world on which we all depend." —Camilla Becket

ABOUT BYKIDS

BYkids produces real-world films for kids, by kids. Talented young storytellers from around the world are paired with seasoned filmmakers to create powerful documentaries about their lives. In partnership with public television and education innovators, we share the films and their educational resources to help make global issues feel personal, relevant and actionable for millions of students. Our work serves as a catalyst for change, igniting important conversations and inspiring a new generation of social activists.

BYkids

SCHOOL GUIDE: SEEDS OF LIFE

PATHWAY 1

WHY IS IT IMPORTANT TO LEARN FROM MANY PERSPECTIVES AND SOURCES?

Diya learns much more than how seeds are preserved and saved. The pesticides used in industrial farming to produce our food, the respect and reverence for biodiversity, the knowledge of traditional farmers, the ongoing research of scientists—Diya explores all these viewpoints. She concludes that balance is critical.

FROM THE FILM

"There is a balance in nature. I began to understand that the way we grow food should be in accordance with nature's processes, too." —Diya Payal

"It is all connected. We are a part of nature. If we take care of nature, nature will take care of us." —Diya Payal

DISCUSSION STARTERS

- How is balance an idea that can be applied to other areas of life in addition to farming and biodiversity?
- How can you learn from listening to the input of others? How can you become better and stronger by balancing your feelings with what you learn from others?
- How can you learn about indigenous and older farming and food techniques that value and respect the earth?
- How can you learn from a range and mix of different voices—scientists, family and extended family, mentors, educators, those with spiritual approaches to the earth?

SUGGESTED PROJECTS

- With a small group or your class, choose a topic you want to explore related to food, biodiversity or farming. It could be as simple as learning where the food in your local grocery store comes from or as broad as learning about the attitudes toward farming or climate change in your community.

  Once you settle on a topic, have each person choose one aspect of it to research and find accurate information from reputable sources. Identify both problems and solutions that show a

need for balancing the response to a complex situation. Ensure that your sources are relying on evidence, or that they clearly identify when they are stating opinions or beliefs, not facts. Give a set time for this research to be completed.

In your group, give each person the same amount of time to present their findings. Next, create a group presentation to share with the class or the school. Show what your group found as balanced views versus unbalanced views. Your presentation could be an infographic, a video, a skit—anything that identifies where there was balance and where there was none or not enough. Explain your group's thoughts on balance and its importance.

- Create a Balanced Life Wall or visual, in your class or digitally. Have everyone in the group participate. On your Wall, attach sticky notes (or another easily removable item that won't damage the surface) with words, links or images that reflect something that represents a balanced life to you. For example, if Diya were with you, she might have a seed or organic fertilizer on one sticky. She might have the word "Family." She might have a link to her BYkids film.

  Your Wall is a work of art, so work with your group to make it a mural that your school community will enjoy sharing and that will get them talking and thinking about the need for balance, on earth and in life.

- Think like a documentary filmmaker or journalist: With your group, put together a list of organizations and people to interview about how to balance taking care of the earth with feeding the many people who live on the planet. What questions would you ask? Who will you interview to get interesting and well-rounded viewpoints and information? Scientists? Farmers and people who grow food themselves or in community gardens? Spiritual leaders?

  Be mindful that some organizations may only respond via email, and that you will also need to do some homework or research about them so that you can ask them informed and relevant questions.

  When your group has completed some interviews, put them into a film, video, skit or written article to share. You might also want to publish these as weekly updates, one interview at a time, as an ongoing series. You will want to edit your work before publication. Everyone should participate.

- Create a children's book about balance—for the earth, for human needs, for everyone. You may work with a group to have writers, editors, graphic designers, illustrators, proofreaders and other appropriate individuals. Donate a print or digital version of your (or your group's) book to the school library. Have a book launch party!

BYkids

SCHOOL GUIDE: SEEDS OF LIFE

PATHWAY 2

HOW CAN YOU UNDERSTAND THE WAYS THAT CLIMATE CHANGE IMPACTS YOU?

Diya learns that there are ways to protect the earth and humanity that have been practiced for centuries, and that there are new solutions to existing problems, too. The seed bank is one response to the damage that industrial farming has caused. Regenerative farming, not using chemical pesticides and respecting the earth are other responses. In her film, she interviews people who respect the earth, and learns from them.

FROM THE FILM

"Seeds of nourishment, seeds of life, are seeds that farmers have used over hundreds or thousands of years." —Vandana Shiva

"Climate change is causing a lot of changes, like drought and unseasonal rainfall or even hail." —Anjali Rana

DISCUSSION STARTERS

- What did you learn from Diya's film that you did not know?
- How did your attitude toward the earth change with new information?
- What would you like to know about your area's ecology and environment?
- What ideas and questions do you have about how we can change to respect the earth more?

SUGGESTED PROJECTS

- With your class or a small group, create a list of questions or a checklist you can use to observe and document environmental changes that could be related to climate change in your school, community or town. Set a limited time for the group (or individuals) to walk around your area and note their observations and questions.

  Come back together and identify a small number of observations your group will investigate and track over time. You might have noticed plants or insects in public areas that you are curious about. For at least two weeks, track their appearance and growth and record your data. (Make sure that each person records data in the same way, e.g., by

measuring the growth of plants and always observing in the same location. Photos may help, too.)

Organize your data into a graph, chart, infographic, or other visual, and discuss what questions it raises. Your teacher or other educators can help you identify resources and experts to suggest possible answers.

Learning to ask good questions is the mark of a thoughtful scientist, journalist and filmmaker. Your group may also choose to create a presentation of your questions. It could be a video, bulletin board, publication—any way you choose to communicate creatively. Raising good questions is a provocative way to get others thinking about the environment and climate.

- Citizen science is a movement that seeks to involve people in collecting scientific data in their area and adding it to a larger scientific study.

  You can learn more about studies that are actively recruiting volunteers here: www.CitizenScience.gov/catalog and www.SciStarter.org

- What is the level of understanding at your school or among your grade or classmates about climate change? How can you find out?

  Write a survey and give it to the students in your school to determine what they know about the science of climate change, and what questions they have about it. Avoid having students write their names (to guard their privacy).

  You may want to ask where they get their information and how they decide if the source is science-based. You may want to ask for their reaction to biased statements such as "Food insecurity and famine are not related to climate change." The response can be a number that you can tally, for example, on a scale of 1 (strongly agree) to 5 (strongly disagree). You may want to ask if they value science, and how strongly.

  Analyze the results and create a report. Be sure to distinguish between actual data and your group's own beliefs, as you may find attitudes you disagree with. Present the results to your school, post it on a bulletin board or include it in the school newspaper.

BYkids

SCHOOL GUIDE: SEEDS OF LIFE

PATHWAY 3

HOW CAN SEED BANKS AND FARMING TECHNIQUES MAKE THE WORLD BETTER FOR EVERYONE?

Diya focuses on saving seeds of local varieties of plants that are in danger of becoming extinct, and on organic farming techniques that do not introduce toxic chemicals into food. Her goal is to teach us how we can be like good parents nurturing the earth.

FROM THE FILM

"It starts with seeds. It extends to the earth, to the lemons, the animals, the families, the elders, the ancestors, the communities and our culture." —Diya Payal

DISCUSSION STARTERS

- How can saving seeds in a seed bank help mitigate climate change?
- Since organic seeds are often more resistant to climate change, how can you find out more about the seeds that generated the food you buy?
- What are some questions you have about traditional and indigenous farming techniques?
- How can you help to restore the earth and make it healthy again?

SUGGESTED PROJECTS

- With your group, research seed banks and regenerative farming practices that restore the soil. Some sources that may help follow, but you can also find local resources, often at universities, that identify which plants are indigenous or invasive in your region. Once you have completed your research, make a video, skit or other creative expression to share the information in an appealing way with your class or school.

  Then plan a BYkids Film Night at your school to show Diya's film and your creations. Be sure to involve an educator to help you get any necessary approvals from your school or district, and to assist in ensuring that student privacy issues are addressed.

Here are a few links, but you will find more that your group is interested in:

- Navdanya is an organization in India that seeks to protect biodiversity and restore the earth's soil and climate: www.navdanya.org
- Regeneration International is dedicated to regenerative agriculture: www.regenerationinternational.org
- The USA.gov website has information on regenerative farming and many other related topics–just search for the topic you are interested in: www.usa.gov
- The United Nation has set sustainable goals for climate change: www.un.org/sustainabledevelopment-action
- The Regenerative Farmers of America is an organization that connects regenerative farms in the U.S. and provides information: www.regenerativefarmersofamerica.com
- Seed Savers is an organization that works to help save and exchange heirloom seeds so they are not lost: exchange.seedsavers.org

- With your group, develop a PSA (public service announcement) about specific ways to help the earth and people. Your PSA may be a video, a bulletin board, an announcement at your school—you choose your medium. As ideas, you might include information on local farmer's markets, organic foods available locally, how to grow plants in your area without chemicals and where to find local sources that are trustworthy.
- As an example, Glynwood Farms in New York (glynwood.org/about) is a not-for-profit organization that works to regenerate the soil, develop techniques for raising animals, train farmers, and more. There may be similar organizations closer to your town. Research them, interview them and create your group's PSA. Some may even have internship opportunities available.
- In her BYkids film, Diya includes a technique for organic composting on her family's fields. What type of composting is possible for you to introduce in your school or town? Are organic foods and products of local farms used at your school cafeteria?

  You may have created a PSA or another presentation to inform and educate others in another BYkids activity. Apply those skills now. Research different types of composting and find at least one that could be done in your school. Work with your group, class and school to start a school garden. If you choose, use heirloom seeds.

What tasks will students need to perform to help staff with composting? Can you apply a design or engineering approach to make them more effective? How can your group or class identify the issues you can address to make composting effective in your school? Can your school compost organically? How can you solve the issues you identify?

Here is some information on the basics of composting, but you will research others that are better suited to your school's needs:
www.usda.gov/peoples-garden/food-access-food-waste/composting

- Organic food can cost more when purchased at a store, making it out of reach for many families. What actions can you take in your area to make organic food accessible to all? With your group, research ways to grow organic vegetables in your environment. Create a how-to video and handout or brochure and make it available to your community.

BYkids

SCHOOL GUIDE: SEEDS OF LIFE

COLLEGE & CAREER READINESS ANCHOR STANDARDS

Dear Educator,

You and your students, in defining the creative and collaborative details of each Pathway and Project, will implement many different standards not limited to any one content area but focused on critical and rigorous, evidence-based thinking. Following are provided some College & Career Readiness Anchor Standards, Common Core ELA and Math Standards and Next Gen Science Standards, and some of the SEL Core Competencies from CASEL. But you and your students will soar beyond those limited standards. We hope you will share your experiences and ideas with us at education@bykids.org.

PATHWAY 1

CCSS ELA COLLEGE & CAREER READINESS ANCHOR STANDARDS

CCRA.R.6 Assess how point of view or purpose shapes content and style.

CCRA.R.7 Integrate and evaluate content in diverse media and formats.

CCRA.W.2 Write informative/explanatory text to examine and convey complex ideas.

CCRA.W.3 Write narratives to develop real or imagined experiences or events.

CCRA.W.4 Produce clear and coherent writing appropriate to task, purpose, and audience.

CCRA.W.7 Conduct research based on focused questions, demonstrating understanding of the subject.

CCRA.SL.1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing your own clearly and persuasively.

CCRA.SL.2 Integrate and evaluate information in diverse media and formats, including visually, quantitatively, and orally.

CCRA.SL.4 Present information, findings, and supporting evidence so that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

CCRA.SL.5 Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

CCRA.SL.6 Adapt speech to a variety of contexts and communicative tasks.

NEXT GEN SCIENCE STANDARDS, SCIENTIFIC and ENGINEERING PRACTICES

SEP 1 Ask questions and define problems.

SOCIAL EMOTIONAL LEARNING CORE COMPETENCE AREAS (from CASEL.ORG)

SELF-AWARENESS:

- Linking feelings, values, and thoughts
- Examining prejudices and biases
- Developing interests and a sense of purpose
- Identifying one's emotions

SOCIAL AWARENESS:

- Taking others' perspectives
- Demonstrating empathy and compassion

SELF-MANAGEMENT:

- Exhibiting self-discipline and self-motivation
- Setting personal and collective goals
- Using planning and organizational skills
- Showing the courage to take initiative
- Demonstrating personal and collective agency

RELATIONSHIP SKILLS:

- Communicating effectively
- Practicing teamwork and collaborative problem-solving
- Showing leadership in groups

RESPONSIBLE DECISION-MAKING:

- Demonstrating curiosity and open-mindedness
- Identifying solutions for personal and social problems
- Reflecting on one's role to promote personal, family, and community well-being
- Evaluating personal, interpersonal, community, and institutional impacts

PATHWAY 2

CCSS ELA COLLEGE & CAREER READINESS ANCHOR STANDARDS

CCRA.W.4 Produce clear and coherent writing appropriate to task, purpose, and audience.

CCRA.SL.1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing your own clearly and persuasively.

CCRA.SL.2 Integrate and evaluate information in diverse media and formats, including visually, quantitatively, and orally.

CCRA.SL.4 Present information, findings, and supporting evidence so that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

CCSS STANDARDS OF MATHEMATICAL PRACTICE

MP1 Make sense of problems and persevere in solving them.

MP 2 Reason abstractly and quantitatively.

MP 3 Construct viable arguments and critique the reasoning of others.

MP 4 Model with mathematics.

MP 8 Look for and express regularity in repeated reasoning.

NEXT GEN SCIENCE STANDARDS, SCIENTIFIC and ENGINEERING PRACTICES

SEP 1 Ask questions and define problems.

SEP 2 Develop and use models.

SEP 4 Analyze and interpret data.

SEP 5 Use mathematics and computational thinking.

SEP 7 Engage in argument from evidence.

SEP 8 Obtain, evaluate, and communicate information.

SOCIAL EMOTIONAL LEARNING CORE COMPETENCE AREAS (from CASEL.ORG)

SELF-AWARENESS:

- Examining prejudices and biases
- Developing interests and a sense of purpose

SOCIAL AWARENESS:

- Taking others' perspectives
- Demonstrating empathy and compassion

SELF-MANAGEMENT:

- Exhibiting self-discipline and self-motivation
- Setting personal and collective goals
- Using planning and organizational skills
- Showing the courage to take initiative
- Demonstrating personal and collective agency

RELATIONSHIP SKILLS:

- Communicating effectively
- Practicing teamwork and collaborative problem-solving
- Showing leadership in groups
- Seeking or offering support and help when needed

RESPONSIBLE DECISION-MAKING:

- Demonstrating curiosity and open-mindedness
- Identifying solutions for personal and social problems
- Learning to make a reasoned judgment after analyzing information, data, facts
- Anticipating and evaluating the consequences of one's actions
- Recognizing how critical thinking skills are useful both in and outside of school
- Reflecting on one's role to promote personal, family, and community well-being

PATHWAY 3

CCSS ELA COLLEGE & CAREER READINESS ANCHOR STANDARDS

CCRA.W.4 Produce clear and coherent writing appropriate to task, purpose, and audience.

CCRA.W.6 Use technology to produce and publish writing and to interact and collaborate with others.

CCRA.W.7 Conduct research based on focused questions, demonstrating understanding of the subject.

CCRA.W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

CCRA.SL.1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing your own clearly and persuasively.

CCRA.SL.2 Integrate and evaluate information in diverse media and formats, including visually, quantitatively, and orally.

CCRA.SL.4 Present information, findings, and supporting evidence so that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

CCSS STANDARDS OF MATHEMATICAL PRACTICE

MP 3 Construct viable arguments and critique the reasoning of others.

MP 5 Use appropriate tools strategically.

MP 8 Look for and express regularity in repeated reasoning.

NEXT GEN SCIENCE STANDARDS, SCIENTIFIC and ENGINEERING PRACTICES

SEP 1 Ask questions for science and define problems for engineering.

SEP 2 Develop and use models.

SEP 5 Use mathematics and computational thinking.

SEP 6 Construct explanations for science and design solutions for engineering.

SEP 7 Engage in argument from evidence.

SEP 8 Obtain, evaluate, and communicate information.

SOCIAL EMOTIONAL LEARNING CORE COMPETENCE AREAS (from CASEL.ORG)

SELF-AWARENESS:

- Developing interests and a sense of purpose

SOCIAL AWARENESS:

- Taking others' perspectives
- Demonstrating empathy and compassion
- Identifying diverse social norms, including unjust ones

- Recognizing situational demands and opportunities
- Understanding the influences of organizations/systems on behavior

SELF-MANAGEMENT:

- Exhibiting self-discipline and self-motivation
- Setting personal and collective goals
- Using planning and organizational skills
- Showing the courage to take initiative
- Demonstrating personal and collective agency

RELATIONSHIP SKILLS:

- Communicating effectively
- Practicing teamwork and collaborative problem-solving
- Showing leadership in groups
- Seeking or offering support and help when needed
- Standing up for the rights of others

RESPONSIBLE DECISION-MAKING:

- Demonstrating curiosity and open-mindedness
- Identifying solutions for personal and social problems
- Learning to make a reasoned judgment after analyzing information, data, facts
- Recognizing how critical thinking skills are useful both in and outside of school
- Reflecting on one's role to promote personal, family, and community well-being
- Evaluating personal, interpersonal, community, and institutional impacts