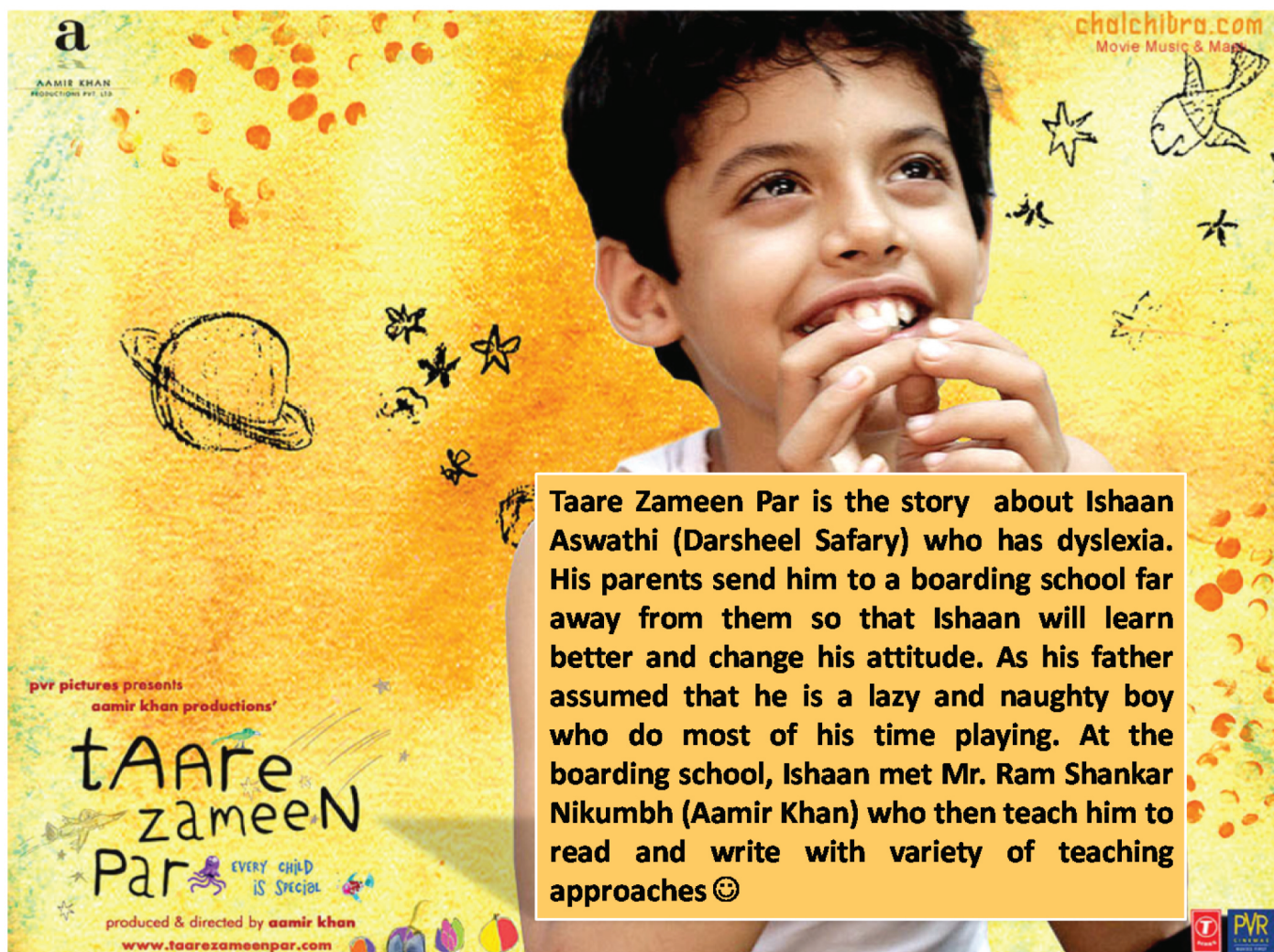


Like stars on Earth



Taare Zameen Par is the story about Ishaan Aswathi (Darsheel Safary) who has dyslexia. His parents send him to a boarding school far away from them so that Ishaan will learn better and change his attitude. As his father assumed that he is a lazy and naughty boy who do most of his time playing. At the boarding school, Ishaan met Mr. Ram Shankar Nikumbh (Aamir Khan) who then teach him to read and write with variety of teaching approaches 😊



JOURNEYS IN FILM STAFF

Joanne Strahl Ashe, Founder & Executive Director
Anna Mara Rutins, Director of Program Development
Eileen Mattingly, Director of Education
Amy Shea, Director of Research
Roger B. Hirschland, Executive Editor
Ethan Silverman, Film Specialist

BOARD OF DIRECTORS

Joanne Strahl Ashe, Founder & Chairman
Erica Spellman Silverman, Vice Chairman
Sara Jo Fischer, Secretary, Treasurer
Diana Barrett, Member at Large
David Shuman, Member at Large

The authors of this curriculum guide:

Tiara Booker-Dwyer
Jonathan Coppadge
Travia Fuller
Jennifer Malachowski
Eileen Mattingly
Emily Mawhinney
Brad Woodward
Jill Woodward
Laura Zlatos

A special thank you to
Ms. Geeta Mohanty.

This curriculum was created thanks to the generous support of the Marc Haas Foundation and the Bettina Baruch Foundation.

Music Experts:

Dr. Bill Watson, Music Consultant
Chair of Performing Arts and Humanities
The Community College of Baltimore County

Tom Frouge
Executive Director, Avokado Artists / ¡Globalquerque!

Joanna Thomas
former A&R Coordinator at Putumayo World Music
and world music DJ

This publication is copyrighted by Journeys in Film, © 2010

Journeys in Film
46 Sandia Lane
Placitas, NM 87043
Tel: 505.867.4666
www.journeysinfilm.org

Table of Contents

Click the Chapter heading to be taken to that page

INTRODUCTION	
Prologue	4
Letter From Liam Neeson	5
<i>Journeys in Film</i> National Advisory Council	6
Introducing <i>Like Stars on Earth</i>	7
To the Teacher	9
Additional Suggestions for Assessment	13
PRE-VIEWING LESSON:	
Lesson 1: Social Studies (Geography and World History) The People and Land of India	15
LESSON FOR VIEWING:	
Lesson 2: Media Literacy The Elements of Film: Constructing Meaning Through Music and Visual Imagery	31
POST-VIEWING LESSONS:	
Lesson 3: Language Arts Making Beauty Out of Nonsense	43
Lesson 4: Mathematics Determining Your Grade: Calculating Percents	51
Lesson 5: Science How the Brain Works	59
Lesson 6: Visual Arts Color and Design: Block-Printed Textiles in India	74
Lesson 7: Film-Specific Cross-Cultural Understanding Diwali — The Festival of Lights	85
Lesson 8: Music, Part I The Historical and Social Background of Bollywood	93
Lesson 9: Music, Part II Exploring Music of India and the World	104
APPENDIX: Teaching the Dyslexic Child	117

Visit www.journeysinfilm.org for a free download of Lessons 8 and 9, thanks to the generous support of the Bettina Baruch Foundation, dedicated to supporting music education.

Prologue

In January of 2002, while attending the Palm Springs International Film Festival, I experienced an epiphany. After spending the week completely immersed in other cultures through film, I felt that I had traveled the world and met many new people through the characters they portrayed. Each film was a complete cultural learning package. The films invited welcome guests into my heart: Hungarian orphans, sweet children living in Tehran, punky Tokyo teenagers, savvy young Tibetan monks living in exile in India, a young boy in China, and a group of coming-of-age French teenagers. As each of their stories opened my mind, I realized how little information or insight most young Americans have about the people from other nations.

I decided to establish *Journeys in Film* and began to search for dynamic foreign films and the expert educators and specialists who could design substantial, comprehensive international education curricula around them. We look for films that offer entertaining storylines and characters, so that reading subtitles and listening to a foreign language do not become obstacles. While the movies are fictional, they typically provide accurate depictions of a culture's food, dress, traditions, and more. We enlist country and culture specialists to review our content, ensuring that our lesson content is culturally sensitive and accurate.

It is now a few years later, and we have reached hundreds of thousands of students with our program. We have run two pilot evaluations, garnered accolades from teachers and administrators who have experienced our teacher-training workshops, and received hundreds of letters from teachers praising our lessons and from students, expressing how grateful they are to be seeing a different view of the world from the one they see on mainstream media.

My hope is that the impressions and lessons from the films selected by *Journeys in Film* will continue to echo in young viewers' hearts and minds for years to come, encouraging greater understanding and inspiring today's students to become cross-culturally competent, productive, and compassionate adults.

I dedicated the *Journeys in Film* program to my brave parents, Maurice and Julia Strahl, who were both Holocaust survivors. They taught me that education is the greatest tool we have for understanding and accepting people of all cultures and traditions and that no one should ever be persecuted because of his or her cultural or racial identity.

Sincerely,



Joanne Strahl Ashe

Founder & Executive Director
Journeys in Film



A Letter From Liam Neeson

In 1993, I performed the role of Oscar Schindler in Steven Spielberg's film *Schindler's List*. This experience deepened my awareness of the Holocaust and the tragic consequences of intolerance and hatred. In 2002, I met Joanne Ashe, who acquainted me with a new educational program—*Journeys in Film — Educating for Global Understanding*. I have served as its national spokesperson since its inception, and I clearly believe in its effectiveness as an educational tool for teaching our youth to value, appreciate, and respect the cultural diversity in our world.

Journeys in Film is a nonprofit organization dedicated to teaching cross-cultural understanding to middle school students through the use of quality, age-appropriate foreign films. The powerful use of films as a teaching tool cannot be underestimated, and *Journeys in Film* has succeeded in creating the first and only film-based curriculum integrated into core academic subjects.

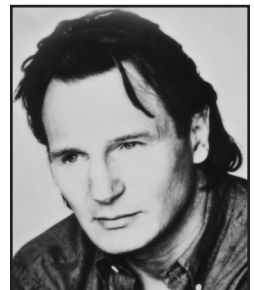
By using carefully selected films that depict life in other countries and cultures around the globe, combined with interdisciplinary curriculum to transform entertainment media into educational media, we can use the classroom to bring the world to each and every student. Our program dispels myths and misconceptions, enabling students to overcome biases; it connects the future leaders of the world with each other. We are laying a foundation for understanding, acceptance, trust, and peace.

Please share my vision of a more harmonious world where understanding and dialogue are key to a healthy and peaceful present and future. I encourage you to participate in the *Journeys in Film* program either as a student, educator, film studio, or financial supporter.

Sincerely,



National Spokesperson
Journeys in Film



National Advisory Council

Journeys in Film is the work of many hands, minds, and hearts. We are most grateful to the members of our National Advisory Council, who volunteer their efforts on our behalf.*

Liam Neeson
National Spokesperson

Brooke Adams

Sharon Bialy

Professor Alan Dershowitz

Gary Foster

Professor Henry Louis Gates Jr.

Rosabeth Moss Kanter

Bruce R. Katz

Jill Iscol, Ed.D.

Harold Ramis

Kevin Roache

Emily Shagley

Tony Shalhoub

Professor Richard A. Shweder

Walter Teller

Loung Ung

Elizabeth Clark Zoia

*Special recognition to the late Sonia Weitz for her valuable service on the Council.

Introducing *Like Stars on Earth*

No one should have to grow up with a misinterpreted mind, falsely accused or educationally mishandled. Success is like a vitamin—so essential if a child is to thrive and sustain motivation. Kids must feel a sense of optimism and excitement as they ponder their possibilities. – Dr. Mel Levine

The Indian film *Taare Zameen Par* (*Like Stars on Earth*) is the story of 8-year-old Ishaan Awasthi (Darsheel Safary). A failure at school, humiliated by teachers and classmates for his inability to keep up with his studies, he seeks escape through daydreams and art. His mother, though sympathetic, doesn't know how to help him. His father, a successful businessman, is increasingly frustrated by his son's academic problems and applies pressure to his young son without seeing improvement. His older brother, who loves and tries to defend Ishaan, nevertheless increases his isolation because he is a high-achieving and diligent student. Finally, completely exasperated by Ishaan, the father makes the decision to send him away to boarding school. There, his problems compounded by his homesickness, Ishaan becomes more and more withdrawn and depressed.

At this critical juncture, a new figure quite literally bounces into his life—substitute art teacher Ram Shankar Nikumbh (Aamir Khan). This dedicated and creative teacher energizes his classes, inspiring them to use their imaginations. He notes how subdued and uninvolved Ishaan is, and finally realizes that dyslexia is the cause of the child's problems. He teaches a lesson about dyslexia and explains to Ishaan's class how many famous and accomplished people have been dyslexic.

As he tutors Ishaan and meets with his parents, Nikumbh also comes to see the brilliance and innovation in Ishaan's art. Ishaan responds by coming out of his depressed state and feeling more confident about himself. Nikumbh organizes a schools arts festival to celebrate talent and imagination, even winning over some of the more traditional and staid teachers. An interesting parallel to the boarding school is the local school for children with more severe learning disabilities; Nikumbh is also a part-time teacher at this school. It provides a look at how even severely handicapped children can flourish if given appropriate love and support.

The film is long, in part because it reflects some Bollywood music traditions. "Bollywood" is the informal name for the major segment of the Indian cinema industry based in Mumbai; the word is a combination of "Bombay," the former name of Mumbai, and "Hollywood." The most distinctive characteristic of these films is a tradition of music, including extravagant song and dance numbers. Films are often long, sometimes over three hours in length, with a combination of romance, comedy, and thrilling action sequences.

The film is especially useful in social studies classes because it gives students an opportunity to meet a contemporary, middle-class Indian family. Students will have the opportunity to draw parallels with their own families, seeing similarities between the obstacles and challenges faced by the Awasthi family and their own. Too often social studies classes focus only on differences between cultures; *Like Stars on Earth* gives students the chance to understand that there are universals as well.

Perhaps the most significant aspect of the film is its ability to help the viewer understand and sympathize with the difficulties of the young protagonist and the heartache and frustration of his parents. Younger students may need help understanding that the father is not just mean; he loves his younger son but cannot understand why he does not behave and think like his older brother. Students in your class who struggle with learning differences will recognize many experiences and emotions they have had. Students who handle academics with ease will learn more about the struggles, and strengths, of their less academically inclined classmates.

Doctor, author, and educator Mel Levine has spent a lifetime studying the physiological, neurological, and psychological reasons for learning differences and discovering practical ways for classroom teachers without training in special education to help students understand their own minds, discover their own strengths, and shore up any weaknesses. The name of the institute he founded, All Kinds of Minds, speaks to the fact that all of us, whether teachers or learners, have unique brains and learning patterns. *Like Stars on Earth* is a remarkable film in its ability to drive that message home, to teachers, to parents, to mainstream students, and, above all, to students who struggle.

STARRING: Darsheel Safary, Aamir Khan, Tisca Chopra, Vipin Sharma

WRITTEN BY Amole Gupte

DIRECTED BY Aamir Khan

PRODUCED BY Aamir Khan

RUNNING TIME: 165 min

COUNTRY: India

LANGUAGE English/Hindi with English subtitles

RATING: PG for thematic material, brief violence and language

AWARDS: Filmfare Awards for Best Actor, Best Director, Best Film and Best Story; Screen Weekly Awards for Best Child Actor, Best Dialogue, Best Director, Best Lyrics, Best Story, Best Supporting Actor, Most Promising Debut Director; National Film Award for Best Film on Family Welfare



To the Teacher...

What is *Journeys in Film*?

Founded in 2003, *Journeys in Film* is a nonprofit organization dedicated to advancing global understanding among students through the combination of age-appropriate films from around the world, interdisciplinary classroom materials, and teachers' professional development workshops. Designed to develop 21st-century skills, this comprehensive curriculum model promotes widespread use of film as a window to the world to help students to mitigate existing attitudes of cultural bias, cultivate empathy, develop a richer understanding of global issues, and prepare for effective participation in the world economy—as active global citizens.

At no additional operating cost, the *Journeys in Film* model strengthens existing school curricular framework by integrating our lesson plans into core subjects, including social studies, math, geography, science, the arts, and media literacy, while also meeting current performance standards.

The foreign films are selected based on age and content appropriateness of the subject matter as well as captivating storytelling. Prominent educators, filmmakers, and cultural specialists are consulted in the creation of the curricula, each one dedicated to an in-depth exploration of the culture depicted in a specific film and related global issues.

Journeys in Film has been widely recognized for its effectiveness and vision. In the seven years since its inception, a small but industrious team of professionals has trained and supported more than 500 educators through professional-development workshops and outreach programs. To date (2010), the *Journeys in Film* curriculum has been integrated into approximately 500 schools and other

educational organizations nationwide and abroad (including after-school and summer school programs, faith-based groups, community service learning projects, correctional facilities, and clinics and health outreach programs), reaching more than 400,000 students.

Finally, a current market analysis of similar media-based educational programs shows that *Journeys in Film* is the only 501(c)(3) charitable organization committed to international education through the compelling combination of films focused on world cultures and global issues with dedicated comprehensive teachers guides.

Why use this program?

To prepare to participate in tomorrow's global arena, your students need to gain a deeper understanding of the world beyond their own borders. *Journeys in Film* offers innovative and engaging tools to explore other cultures, beyond the often negative images seen in print, television, and film media.

For today's media-centric youth, film is an appropriate and effective teaching tool. *Journeys in Film* has carefully selected quality films telling the stories of young people living in locations that may otherwise never be experienced by your students. They travel through these characters and their stories: They discover the joy of art and individual expression with an Indian child in *Like Stars on Earth*, drink tea with an Iranian family in *Children of Heaven*, play soccer in a Tibetan monastery in *The Cup*, find themselves in the conflict between urban grandson and rural grandmother in South Korea in *The Way Home*, watch modern ways challenge Maori traditions

in New Zealand in *Whale Rider*, and learn about the HIV/AIDS epidemic in South Africa in *Beat the Drum*.

Through each film in this program, your students gain a perspective on daily life of their peers around the world. By identifying with the appealing (and occasionally not so appealing) protagonists, your students understand another culture far beyond the limitations of a textbook. These lessons not only bring the world into the classroom, but also allow students to explore the diversity of their own classroom, community, and family.

Who can benefit from this curriculum?

The curriculum was written expressly for students in grades 6 to 9. However, older and younger students may be intrigued by the films as well, and the curriculum can be adapted for them.

How are the films selected?

Members of *Journeys in Film* have viewed dozens of films, both individually and at film festivals, in search of quality foreign films with storylines captivating enough to engage middle school students. The films must be rated G or PG. All films must be set within the past 15-20 years in order to offer a present-day connection for the student, as opposed to period pieces with cultural traditions that may not seem real in today's youth culture.

But I'm supposed to be using the standards in my classroom....

Of course you are – any good teacher is meeting standards. Because this is a curriculum meant for a national audience, we chose to use the McRel standards rather than the standards for any particular state. Since 1990, Mid-continent Research for Education and Learning (McRel) has been systematically collecting, reviewing, and analyzing state curriculum documents in all subject areas. McRel publishes a report on this work, called *Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education*, and also has these standards and benchmarks available on their website at

<http://www.mcrel.org/compendium/browse.asp>. In the standards for each lesson plan, you will be able to recognize the corresponding subject-area standards for your state, even if the language is slightly different. While the Common Core State Standards Initiative is currently (2010) providing leadership in national standards for mathematics and English language arts, *Journeys in Film* finds the broader range of the McRel Compendium of Standards to be a better fit with the interdisciplinary nature of our curricula.

Will my students be able to read the subtitles?

There is an ancient Iranian proverb that says, "He who wants a rose must respect the thorn." Students are sometimes hesitant to watch a film with subtitles, but once they are hooked by the storyline of the film, reading the subtitles may become automatic and they may not even be conscious of doing so. We have a few suggestions to ease this transition.

Begin by asking the students how many have seen a subtitled film. Explain to them that we watch a subtitled film (as we do any film, for that matter) using not only the words, but also the sounds, the music, the actors' gestures, the locations, and more. The whole film helps to tell the story; dialogue is just one of the many ways the story is told. Suggest that students don't need to worry about following every single word. They should just skim the words for a general meaning and watch the film as a whole.

You can also help your students by using the following tips from teachers in the field:

- Whenever possible, use a large screen format, for better viewing of subtitles. If there is an LCD projector available at your school, by all means use it. In Tulsa, Oklahoma, Circle Cinema, an independent community film theater, hosted hundreds of students for film viewings as a local partner in the *Journeys in Film* program; you might be able to arrange a similar experience for your students with a local theater.
- Auditorium-style seating to simulate the film-going experience is ideal, but not necessary.
- As your school schedule permits, running the film in its entirety is preferable to breaking it into one-period chunks, unless needs of specific student groups require viewing the film in smaller sequences. Offer a break to coincide with recess to stretch and possibly have a refreshment or go outside. See our suggestions below under ***Suggestions for Implementation***.
- Bring in one or more older students to read subtitles aloud if your student group requires assistance in

reading comprehension. This model also offers an opportunity for mentoring. Be sure to give the older students the opportunity to view the film in advance and become familiar with the subtitles.

- For TESL students, use subtitles with all films, including the English-language films like *Whale Rider*, to offer the students an opportunity to follow along. Set the mode to English subtitles rather than hearing-impaired, unless there is a student with this disability in the class.
- A DVD is preferable to a VCR for later lessons that call for showing particular scenes. Be sure that if you buy a used DVD over the Internet, it is formatted for North American DVD viewing.

Suggestions for Implementation

As a rule of thumb, we believe that the teacher can best decide what methods of film viewing and lesson implementation are appropriate for each specific class.

However, we recommend an inter-disciplinary approach in order to make the greatest impact on the student; this curriculum guide makes this easy to facilitate. (It's much easier for teachers to come on board if they receive a fully articulated, standards-based lesson plan to work with.) This also allows a group of teachers to share their efforts and class time for a truly comprehensive, immersive experience, instead of one or two teachers giving up one or two weeks of class time in this current climate of reaching benchmarks and quotas. *Journeys in Film* encourages you to share this curriculum with your colleagues to create a team approach to engage your entire

school community. Your school's gym teacher might be a foreign film aficionado who could create culturally relevant athletic activities to join the fun.

Consider devoting an entire day or even several days to one film and its curriculum. Cancel all other classes, prepare students by having already implemented the pre-film lesson plan(s), view the film together as one entire student body or in large groups, and design a round-robin rotational method for the remaining lesson plans that are deemed core or essential by your school community. This full impact, immersive method has resulted in thoughtful dialogue between students, staff, and faculty members.

Please note:

You do not have to follow these lesson plans in order, nor do you have to complete all of them. However, please notice that some lesson plans have been designed for use *before* viewing the film, as a means for engaging the students about the country and culture and offering a context from which to connect with the film. The bulk of the lesson plans have been designed for use *after* viewing the film.

Here are some of our favorite suggestions from our pilot teachers:

- Collaborate with other schools in your district. Bring the skits, role-plays, art projects, and other *Journeys in Film* lessons into elementary classrooms, offering older students the opportunity to act as teachers by presenting a culture they've learned about.
- Start an after-school foreign film club, either as a means of using this program if it doesn't fit into the regular class schedule or as an opportunity for interested students to further explore film from other countries.
- Establish a quarterly film night or ongoing film festival, schedule the viewing in the evening or during the weekend, and invite parents to participate. This model will acquaint parents with the innovative programs being used in your school and encourage dialogue between parents and children. Serve popcorn!
- Designate a hallway or display case for *Journeys in Film*. Enlist the assistance of parents, business leaders, and community members who may have some connection to the culture represented in the featured film in decorating the space.
- Invite parents, business leaders, and community members from the culture of a given film to visit with students, tell their stories, share traditional foods, etc.
- On a larger scale, your school can plan an annual Global Village Day as the kickoff or finale to the *Journeys in Film* program series.

What else can I use to promote cross-cultural understanding in my classroom?

There is an almost limitless supply of cross-cultural materials available to teachers from organizations and the Internet. The one we have found that fits well with the *Journeys in Film* approach is a free resource from the Peace Corps Coverdell World Wise Schools program. The booklet *Building Bridges: A Peace Corps Classroom Guide to Cross-Cultural Understanding* is designed for grades 6–12. Its 13 lively, interactive lessons were designed for the classroom from Peace Corps training materials to help American students learn about culture, stereotyping, and the resolution of cross-cultural misunderstanding. If you wish, you can use this as a supplement to, or in place of, the general cross-cultural understanding lessons from *Journeys in Film*. You can obtain this book free by calling the Peace Corps at 1-800-424-8580, ext.1450, or by downloading it from <http://peacecorps.gov/www/bridges/index.html>.

So, welcome to *Journeys in Film*!

And above all, no matter which specific implementation methods you use as you begin your own *Journeys in Film*, have fun with your students and colleagues while you're doing it!

For information about other *Journeys in Film* products and services (curriculum guides, professional development workshops, and other resources), please visit our website: www.journeysinfilm.org.

Some Additional Suggestions for Assessment

Modern assessment methods have moved beyond the objective test given at the end of a chapter or unit; instead teachers look for ways to measure students' deeper understanding of ideas. We have included assessment techniques in each lesson in this unit, including the valuable tool for student self-assessment included in several of the lessons. Here are some additional possibilities for you to consider as you plan your unit on this film. Be sure to brief students on what kinds of assessment you will do before you begin the unit.

1. Have students keep a journal throughout the unit. Based on the standards for each lesson, create a series of open-ended questions for students to choose from. Depending on the ability of your class, determine and make clear the number of questions that they must answer, when each journal entry must be completed, and the length of each journal entry. Create a rubric on which to judge the journal as a whole and be sure to share the rubric with the students before they begin.
2. Have students put together a class newspaper based on the film. Review the various parts of a newspaper with them (news report, news analysis, editorial, letters to the editor, obituaries, advice columns, sports, fashion, even comics and crosswords). Appoint student editors and then allow students time to brainstorm how to produce a newspaper based on the film. For example, a report about a student art show in Mumbai by a news reporter, advertisements for the schools depicted

in the film, a food column about Indian food, a letter to an advice column written by Ishaan's mother, etc. If you have desktop publishing software, students can design the newspaper on computer, or they can do paste-ups on large sheets of heavy paper.

3. Conduct face-to-face interviews with individual students or pairs of students. This can be done during study halls or lunch, as well as during class time. Make sure students know that the burden of the interview is on them to convey how well they understand the film and the lessons you have used to introduce and follow the film. Help them understand that they should prepare for the interview by reviewing what they have learned. Give them a rubric ahead of time to show how you will judge them on familiarity with the film, learning accomplished during the lessons, poise during the interview, respect for others' opinions (if conducting a joint interview), etc. You can use the standards in this unit as a starting place for your questions. And be sure you don't ask the same questions of each student or group, or the later interviewees will start limiting their preparation.

4. Have students collect a portfolio of work that they have done in this unit. Have them arrange the work from the elements that they think are the best (in front) to those they think are the least effective. Then have them write a response to these or similar questions:

Why do you think _____ is your best work?

What problems did you have to face as you started this assignment?

How did you overcome those problems?

Why do you think _____ is your least effective work?

What goals do you have for yourself as a learner for the rest of the year?

5. Play a game like *Jeopardy!* Have students come up with their own questions, perhaps splitting the class into two groups. Have each group split into five or six smaller teams and assign them a topic. Have them create six *Jeopardy!*-style answers, each with the appropriate question. Then trade the questions and play the game with each large group. You can give a simple reward, like allowing the winning team to leave the room first at the end of the period.

The People and Land of India

Enduring Understandings:

- The impetus toward peace and peace movements is a centuries-old tradition respected by many cultures and has been used as a powerful political tool.
- India is the largest of many countries in South Asia.
- The common bonds of shared culture unify people into a national identity even in countries that have diverse populations and languages.

Essential Questions:

- Where is India and who are its neighbors?
- What is the geography of the Asian subcontinent like?
- What past experiences and traditions have affected the creation of modern day India?
- How have the sharing of peace and the power of the ideal of peace helped shape the country of India?

Notes to the Teacher:

This first lesson introduces students to the geography and culture of India and provides a context for viewing the film *Like Stars on Earth*. It is divided into four sections: an introduction, which introduces the term *namaste*; a map-creating exercise; and two guided readings on Indian daily life and the political achievement of independence.

When planning **ACTIVITY 2**, keep in mind that students often perform better on map activities when allowed to work together in pairs or cooperative groups. Some students benefit from a labeling system when making maps, which allows them to create a set of labels (numbers, letters, Roman numerals, etc.) for their lists and map; others may benefit from writing complete place names on the map. You may wish to model both for the class and allow students to choose the technique that works best for them. For struggling students, you may wish to use only one map and to limit the number of places to label. A note on label systems: Keep it short and simple! Frequently in class students will want to choose a unique color and symbol for each item. This will be too confusing; a simple number–letter sequence is best. Many students spend too much time just flipping through maps and staring at the page to locate places; help them with strategies to increase their success, based on the resources used for this activity.

ACTIVITIES 3 and **4** use short readings followed by questions to check understanding, reinforce vocabulary, and provoke additional thought. Encourage students to read the questions before they begin the passage in each case,

so that they will understand the information they are looking for. Remind them that this is a good strategy when using a textbook as well.

If you have students in your class of Indian descent, be sensitive to their feelings about this unit. Do not expect them to be experts on India, but give them the opportunity to share information about the country and its culture if they wish. Having a guest speaker who is knowledgeable about India to answer questions would be an excellent enrichment activity.

DURATION OF LESSON:

Two or three class periods

ASSESSMENT:

Student maps of the political and physical geography of South Asia

Student answers to guided reading questions on Handouts 4 and 5

Letters to a pen pal

Materials needed:

Atlas, printed maps, or Internet map resources

Colored pencils, pens, or markers

Photocopies for each student:

Handout 1: *Namaste*

Handout 2: Mapping South Asia: A Checklist

Handout 3: Maps of South Asia

Handout 4: Daily Life in India

Handout 5: India Becomes an Independent Nation

WORLD HISTORY STANDARD

STANDARD 43. Understands how post-World War II reconstruction occurred, new international power relations took shape, and colonial empires broke up

LEVEL II (GRADES 5–6)

3. Understands political and social change in the developing countries of the Middle East, Africa, and Asia after World War II

LEVEL III (GRADES 7–8)

4. Understands nationalist movements and other attempts by colonial countries to achieve independence after World War II (e.g., the impact of Indian nationalism on other movements in Africa and Asia, and reasons for the division of the subcontinent)



GEOGRAPHY STANDARDS

STANDARD 2. Knows the location of places, geographic features, and patterns of the environment

LEVEL III (GRADES 6–8)

1. Knows the location of physical and human features on maps and globes

STANDARD 5. Understands the concept of regions

1. Knows regions at various spatial scales (e.g., hemispheres, regions within continents, countries, cities)
2. Understands criteria that give a region identity
4. Knows factors that contribute to changing regional characteristics (e.g., economic development, accessibility, migration, media image)

STANDARD 6. Understands that culture and experience influence people's perceptions of places and regions

LEVEL III (GRADES 6–8)

3. Knows the ways in which culture influences the perception of places and regions (e.g., religion and other belief systems, language and tradition; perceptions of “beautiful” or “valuable”)

STANDARD 12. Understands the patterns of human settlement and their causes

LEVEL III (GRADES 6–8)

1. Knows areas of dense human settlement and why they are densely populated (e.g., fertile soil, good transportation, and availability of water in the Ganges River Valley; availability of coal, iron, and other natural resources and river transportation in the Ruhr)

Procedure:

ACTIVITY 1: Introduction—*Namaste*

1. Individually greet students at the classroom door with any of the following greetings: “*Mahalo*,” “*Salaam*,” “*Shalom*,” “*Aloha*,” “*Peace*.” (See the examples on Handout 4.) Do not include “*Namaste*” yet. As you greet students, ask each individually to quietly take his or her seat without talking.
2. When students are seated and quiet, carefully close the door to help ensure a quiet and private environment. Move silently to the front of the classroom and wait for students’ focus and silent attention. Ask students to take slow, deep, quiet breaths—inhale through the nose and exhale through the mouth slowly and quietly as you model the behavior for them. Wait as needed to focus their attention. Repeat this at least three times. Ask students to think about peace and repeat two more breaths.
3. Write the word “Peace” on the board and call on students to share their ideas, definitions, and explanations of peace. Write student responses on the board under the title.
4. Explain to students that the greeting “Peace” has been used by many cultures for centuries. Explain that the greeting of peace is still a common practice today. Tell students that the greeting of peace is common in Indian culture and that they are going to learn that greeting and how the idea of peace was used to help India gain its independence from Britain.
5. Distribute Handout 4. Review the introduction and greetings from other cultures at the top of the page. Teach them the greeting “*Namaste*.” Have students stand and greet each other in pairs using *Namaste*. (Point out that *Namaste* is also a word of farewell.)

6. Ask students to respond individually to the questions at the end of **HANDOUT 4**. (Note: Question 4 should be completed only after viewing *Like Stars on Earth*.)

7. Review and share student responses.

ACTIVITY 2: Mapping India and South Asia

1. Explain to students that they are soon going to see a movie about a student who lives in India, and that to understand the movie better, it is helpful to have some knowledge of the country and the region surrounding it. Check students' prior knowledge by asking them (a) to describe the location of India, naming the continent on which it is located, (b) to name a body of water or a landform in or around India, and (c) to name a neighboring country of India.

2. Explain to students that they are going to make maps of South Asia together. Distribute Handout 2, the list of map requirements, and Handout 3, the outline maps of South Asia. Depending on which map(s) you use and the level of the students' familiarity with maps in general, review the major elements of each map. Provide each student with access to a map resource in an atlas, a textbook, or online.

3. Divide students into teams of two or three. Direct them to locate and correctly label the map(s) with each of the items on the list. Students may help each other locate geographic features, but each student should make his or her own map. If you want students to use particular labels, explain that system or show students how they could create their own label system of key/legend for their maps. Allow enough time for students to complete maps. Circulate among students to help them with appropriate label systems and remind them how to use the index of their resource to help locate difficult-to-find items.

4. When students are finished, collect the maps for assessment, or review places with them in class to confirm and correct their own map-making skills.

5. Conclude this part of the lesson by asking students if they know of any significant events now occurring in any of the countries on the map.



ACTIVITY 3: Daily life in India

1. Draw a chart on the board and fill in the data below for students, allowing them time to take notes, ask questions, and digest the significance of the statistics¹ as you proceed.

BASIC FACTS ABOUT INDIA (AS OF JULY 2010)	BASIC FACTS ABOUT THE UNITED STATES (AS OF JULY 2010)
CAPITAL: New Delhi	CAPITAL: Washington, D.C.
POPULATION: 1.17 billion (estimate; more than three times the number in the U.S.—only China is larger)	POPULATION: 310,232,863 (estimate)
POPULATION DENSITY: 324 per square kilometer (829 per square mile)	POPULATION DENSITY: 80 per square mile (2000 U.S. Census; 2010 Census not available)
POPULATION DISTRIBUTION: 71% rural/villages, 29% urban areas	POPULATION DISTRIBUTION: 18% rural/villages 82% urban
30% of population is 14 years old or under	20% of population is 14 years old or under
LITERACY RATE: 61% (male 73%, female 48%)	LITERACY RATE: 99% both male and female
OFFICIAL LANGUAGES: The most common are Hindi and English. There are 14 other official languages.	OFFICIAL LANGUAGE: English (Hawaiian is also official in the state of Hawaii)

2. Tell students that they are going to read a passage about daily life in India. Distribute Handout 4 and give them a chance to survey the headings of each section and read the questions for which they will be seeking answers as they read. Allow students time to read and answer questions. You may have them compare answers with a partner to check their work.

Suggested answers:

1. *reincarnation*: the belief that a soul goes through a series of births, deaths, and rebirths until united with Brahma.

caste system: a system in which people are born into different levels of society with different ranks

charpoy: a small wooden bed with knotted strings

sari: a brightly colored cloth draped over the body like a long dress

purdah: the custom of women covering their faces with a long veil

joint family system: related nuclear families living in one residence

2. Cities are more crowded but offer more jobs and opportunities. Villages are less crowded and offer more traditional work and customs.
3. Better education, more job opportunities in technology and government
4. Many more people are literate and can therefore qualify for better jobs.

¹ Sources: CIA World Factbook, 2010, at <https://www.cia.gov/library/publications/the-world-factbook/geos/in.html>; State Department Country Background Notes at <http://www.state.gov/r/pa/ei/bgn/>; U.S. Census at <http://quickfacts.census.gov/qfd/states/00000.html/>

3. Conclude this part of the lesson by asking students to imagine themselves as students in India and to write a letter describing their daily life to a pen pal in the United States. Encourage students to make specific choices about what area of India they live in, their age, their family, etc.

ACTIVITY 4: India's Path to Independence

1. Ask students to review what they have learned so far about India. Ask them why they think so many people in India speak English. Explain that India was occupied by the British for more than 200 years.)
2. Arrange students in pairs. Ask them to brainstorm two advantages and two disadvantages for the people of India that might have resulted from the British occupation. List their answers on the board.
3. Distribute **HANDOUT 5**. Remind students about the previous activity, when they read questions before they read the passage. Ask them to do so again. Give them time to read the passage and answer the questions.
2. He used protests and boycotts, and eventually gained the support of other countries.
3. Through nonviolent protest, Indians induced the British to set up Indian-governed provinces in 1935. In 1946, Britain agreed to independence, but Hindu–Muslim violence broke out. India was partitioned and two sections of Pakistan were created. Eventually East Pakistan went to war and became independent Bangladesh.
4. Student opinions will vary, but most will agree that nonviolence was more appealing to other nations than violent rebellion.
4. Ask students to consider their feelings about nonviolent resistance. Do they feel that breaking the law to achieve a political result is justified? How does the Indian independence movement compare with that of the United States? Allow respectful discussion of all points of view.

SUGGESTED ANSWERS:

1. *nationalism*: pride in one's own country

nonviolent resistance: working against an enemy or oppressor in any way other than violently

boycott: refusal to buy or use certain goods

partition: division into two or more parts

HANDOUT 1

Namaste

The greeting “Peace” has been used by many cultures, religions, and societies for thousands of years. Saying “Peace” is also used as a farewell or as a sign of friendship and equality. The word “peace” is used as a greeting among people who desire or promote a peaceful existence. Here are some examples:

Mahalo / Aloha—These Hawaiian words, meaning thanks, admiration, regards, respects, gratitude, esteem, and peace, are used as both a greeting and farewell.

Salaam (Selam, Salam)—This Arabic word for peace, safety, welfare, prosperity, friendliness is used as a greeting.

Shalom—The Hebrew word for peace and wellbeing is used as both a greeting and a farewell.

Peace—The English word for the absence of conflict, safety, serenity, quiet, and welfare is used as a greeting and a farewell, especially in Christian practice as “Peace be with you” and “Rest in peace.” Informal usage includes hippie peace greetings and “Peace out.”

Namaste (pronounced “Nah-MAH-stay”)—This Hindi word of greeting and farewell is a combination of two ancient Sanskrit words: *namas* means “to bow” and *te* means “to you.” In the Indian gesture *Namaste*, hands are held with palms pressed together in front of the heart at chest height, the head is slightly down in a polite bow, and sometimes the eyes are closed for a moment.

Namaste is important in Indian culture because it is a peaceful and humble moment of recognition and awareness that we are all on equal standing, that we are all one, and that each person recognizes the unique special spirit inside the other, that participants meet each other in peace.

Answer the following questions individually on the back of this paper and be prepared to share your ideas about *Namaste*.

1. Why might it be important for people to greet one another with peace?
2. Is the practice of peace hard to maintain? Why?
3. How could you describe the culture of India, which likes to greet others with *Namaste*?
4. (To be answered after you have seen the film *Like Stars on Earth*) How is the idea of *Namaste* shown in the movie?

HANDOUT 2 Mapping South Asia: A Checklist

Using a map, an atlas or the Internet, locate each of the following and label them in the correct location on the appropriate outline map.

POLITICAL – COUNTRIES AND CITIES

Countries:

Afghanistan
Bangladesh
Bhutan
Nepal
Pakistan
Sri Lanka

Cities:

Kolkata (Calcutta), India
Delhi, India
Islamabad, Pakistan
Karachi, Pakistan
Kathmandu, Nepal
Madras, India
Mumbai (Bombay), India
New Delhi, India

PHYSICAL – BODIES OF WATER AND LANDFORMS

Bodies of Water:

Arabian Sea
Bay of Bengal
Brahmaputra River
Ganges River
Indian Ocean
Indus River
Mouths of the Ganges
Narmada River

Landforms:

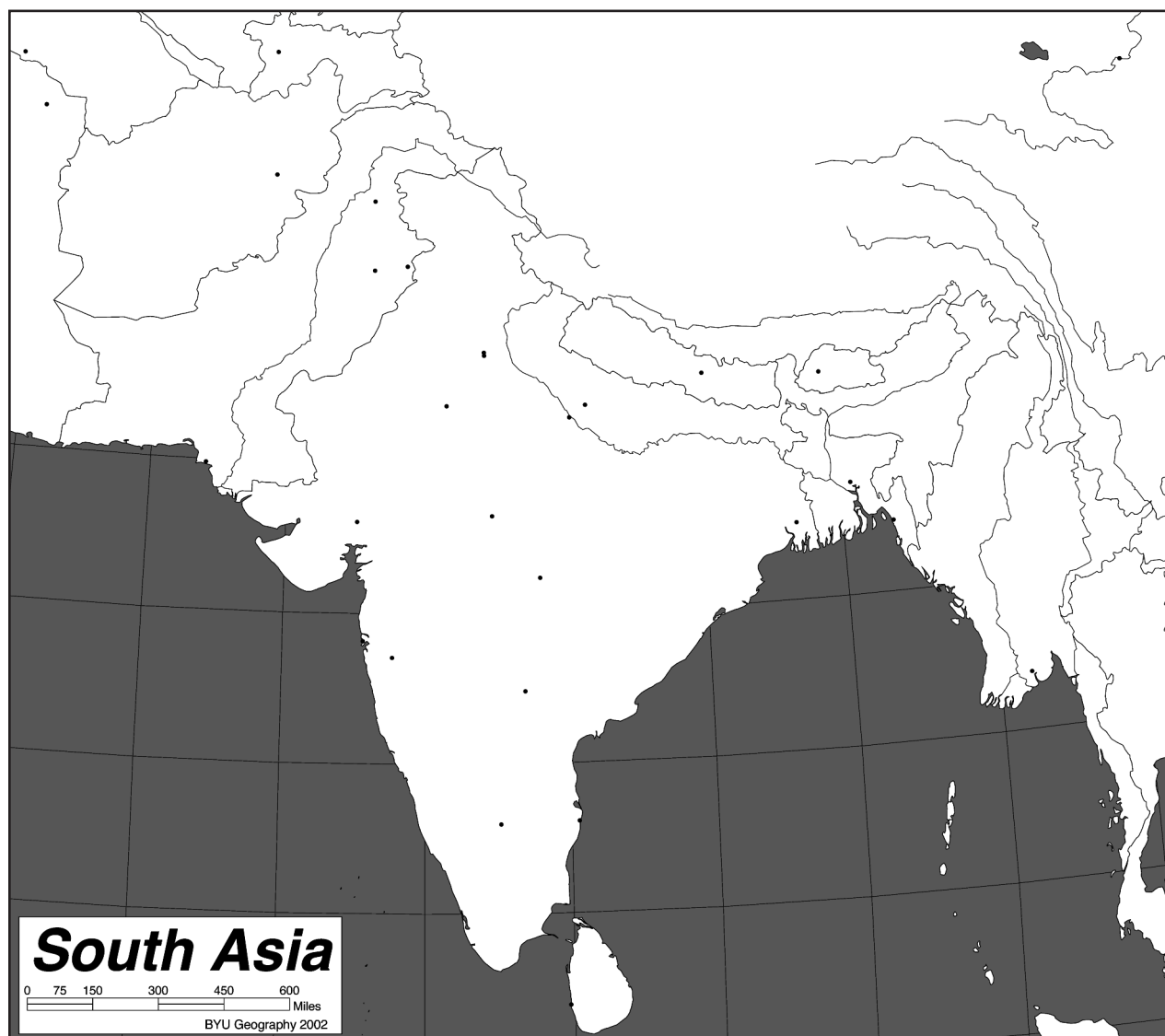
Eastern Ghats
Great Indian Desert (Thar Desert)
Himalaya
Hindu Kush
Indo-Gangetic Plain
Karakoram Range
Mount Everest
Western Ghats

HANDOUT 3 ► P.1 South Asia Political Outline Map

STUDENT NAME: _____

DATE: _____

Label the Asian countries and cities from your checklist on the map below:



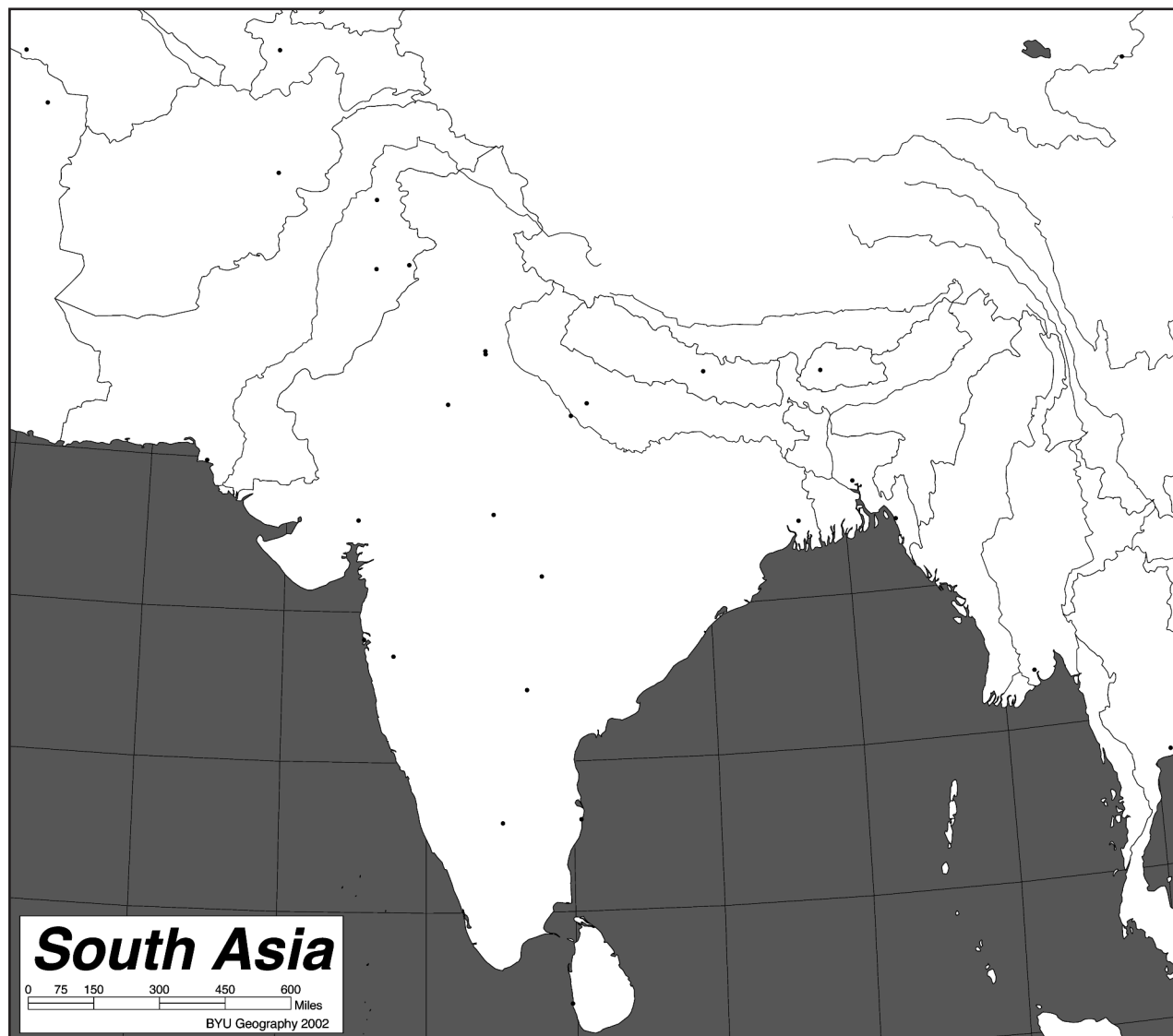
[Source: Brigham Young University Geography Dept. at <http://www.geog.byu.edu/outlineMaps.dhtml>]

HANDOUT 3 ► P.2 South Asia Physical Outline Map

STUDENT NAME: _____

DATE: _____

On the map below, label the bodies of water and landforms from your checklist:



[Source: Brigham Young University Geography Dept. at <http://www.geog.byu.edu/outlineMaps.dhtml>]

HANDOUT 4 ► P.1 Daily Life in India

DIRECTIONS: As you read the following information about life in India, answer the questions at the end of the reading.

Religious Life

The majority of people in India practice Hinduism. Hinduism is an ancient religion whose followers believe in a Creator named Brahma and which teaches the unity of all life. Because every creature has a soul, Hindus treat animals with great respect. Cows are especially sacred to Hindus and are allowed to wander freely through city streets. Hindus also consider the Ganges River to be holy. If you drink or bathe in the waters of the Ganges, it will purify and clean your soul.

According to Hinduism, the final goal of all living things is to unify with Brahma. To reach this state of perfection, where one exists without change or pain, Hindus believe that a soul passes through many cycles of **reincarnation**. They believe that a soul goes through a series of births, deaths, and rebirths, with the soul passing from body to body until it becomes pure enough to unite with Brahma.

Although the majority of Indians are Hindu, there are other religions practiced in India as well, including Islam, Christianity, and Sikhism.

Caste System

For hundreds of years Hindu society was organized by the **caste system**. In this system, people are born into different levels of society with different ranks. Each caste has its own duties and obligations. People are to obey the rules of the caste they were born into and to carry out their duties in this life in order to improve their position in the next life.

Today the caste system continues to influence people's lives, although it has become less rigid and important. Many people today take jobs and study for professions that were not part of their traditional caste. However, social groups and personal relationships are often confined to people in the same caste. People at the bottom of the caste system continue to have fewer educational and employment opportunities, compared with people in the higher castes.

Village Life

About 70 percent of Indians live in villages and farm for a living. Most villages are a group of houses surrounded by fields. There may be a village school, a common pool and well used for washing clothes or drinking water, and small, private vegetable gardens. A path may lead to the next village. Sometimes bus service will connect a village with a larger town.

Homes belonging to well-to-do farmers may be built of brick and have concrete floors. Houses owned by poor villagers may be made of mud and have floors of packed earth. Often for poor families, the only furniture is a **charpoy**—a small wooden bed with knotted strings instead of a mattress.

HANDOUT 4 ► P.2 Daily Life in India

For both religious and economic reasons Indians follow a mostly vegetarian diet. Hindus do not eat beef; Muslims do not eat pork. Some Indians will eat goat, lamb, and chicken, and those who live near rivers or the sea will eat fish. Most Indians eat some form of rice every day.

Because most of India is so hot and humid, clothing is light, loose, and comfortable. Many women wear a sari—a brightly colored cloth draped over the body like a long dress. Some Indian women cover their face with a veil in public. This custom, called *purdah*, began with Muslims and is followed by many Hindus as well.

Rural Family Life

Families in Indian villages are generally large. When a man gets married, he often brings his new wife to live in his parents' house and that household will include uncles and other relatives. This is known as the joint family system. Everyone in the family has a role to play. Children from youngest to oldest care for animals and work in the fields. The elderly do light chores around the house.

Many modern technologies have made their way into Indian lifestyle and villages. Most villages have electricity, and television reaches 80 percent of the population. Because illiteracy is still widespread, television and radio, and now even the Internet, are the most powerful media for communication in India.

Life in Cities

Towns and cities in India can range from 20,000 inhabitants to major cities with more than 12 million. Cities in India are busy and modern, just like cities in the West. Whereas New York City has 24,000 people per square mile, the Indian city of Mumbai (Bombay) has an amazing 128,000 people per square mile. Despite this overcrowding, most families consider life in the city—which offers them more opportunities for work and education—to be far better than life in a village.

Modern Improvements

Even though 65 percent of Indians are farmers, the country is one of the world's leading industrial nations. India has made great advances and investments in computers, space research, and consumer goods such as televisions and electronic devices.

Most of the new customers for these goods are members of India's growing urban middle class. Over the past two decades, teachers, doctors, government workers, and the technology work force have become an expanding part of the new middle class in India.

As recently as only a generation ago, in the late 1950s, only about 16 percent of Indians could read and write. By the mid-1990s that figure was nearly 50 percent, and it had risen to 66 percent by the end of the 20th century. Most villages now have a primary school, although many children still fail to complete their schooling when they have to work to support the family.

HANDOUT 4 ► P.3 Daily Life in India

STUDENT NAME: _____ **DATE:** _____

Answer the following questions using the information you have gathered in your reading. Continue on the back of this page if you need additional space.

1. Define the following terms:

reincarnation

caste system

charpoy

sari

purdah

joint family system

2. Describe some differences between village and city life in India.

3. Describe some of the reasons for the growth of India's middle class.

4. In what ways is education in India connected to the country's economic improvement?

HANDOUT 5 ► P.1 India Becomes an Independent Nation

DIRECTIONS: After you read the following information about life in India, answer the questions at the end of the reading.

From the mid-1700s, Britain had controlled India as a colonial empire. The British made some changes that helped modernize India, such as ending slavery, improving schools, and building a railroad system. However, some of the changes made during the British occupation were not so positive.

India had a history of a strong fabric industry. Indians were some of the first people to grow cotton. The cotton was spun into many fabrics, such as calico, cashmere, chintz, and muslin, and was traded throughout Asia. The British took the raw cotton fiber back home to England and used modern machines to make the fabrics cheaply, and then returned it to sell in India and Asia. Millions of Indian workers lost their jobs because of this practice.

Also, the British did not treat their Indian subjects as equals. The colonial government and army were all controlled by the British, who kept all the best jobs for themselves. This situation frustrated and angered many Indians.

MOHANDAS GANDHI

By the end of the 1800s Indians had developed a strong feeling of **nationalism** (pride in their own country). Western ideas of individual rights and the right to self-government became popular in India and spread through the educated middle class of doctors, lawyers, and teachers. Many middle-class families sent their children to England to go to school, and the younger generation came back to India with the idea of independence for India. Mohandas Gandhi studied law in England and returned to India to help and then lead the country to independence.

Gandhi, who was later called *Mahatma*, meaning “the Great Soul,” believed in using nonviolent resistance against the British injustice. **Nonviolent resistance** means working against an enemy or oppressor in a peaceful manner. Gandhi believed that peace and love were more powerful than violence and he won the hearts and support of the Indian people.

HANDOUT 5 ► P.2 India Becomes an Independent Nation

Gandhi peacefully resisted British rule by using boycotts as a form of protest. A boycott is refusal to buy or use certain goods. Gandhi and millions of Indian stopped wearing clothes made of British fabric, and the sale of British cloth in India all but disappeared. Gandhi's program of nonviolent resistance involved millions of people nationwide; while it was mostly peaceful, some riots broke out and some people were hurt and even killed.

Eventually Gandhi and his followers attracted the support of other countries. In 1935 the British gave in to the pressure from Indians and from other countries; they agreed to set up provinces that were controlled and governed by Indians.

RELIGIOUS CONFLICT

By the 1940s the difficult relationship between Hindus and Muslims in India had gotten worse. The Muslims were mostly poorer peasants and workers in India and the Hindus were often landowners. In the beginning of the fight for independence they had worked together with Gandhi, but toward the end they each feared that the other group would end up in control.

In 1946 Britain offered complete independence to India if the two groups could agree on what type of government they would have. They could not agree, and riots broke out, killing thousands.

Gandhi wanted a united India, but finally the British and the Indian leaders agreed to a **partition**, or division, of India into separate Hindu and Muslim countries. Part of the country became the mostly Hindu country of India, and the northwestern and northeastern corners became the divided nation of Pakistan.

Independence came to India and Pakistan on August 15, 1947. Both sides celebrated their new countries. Independence also brought confusion and hardship. In one of the greatest migrations of people in history, 12 million people moved to be in the country where they were the majority: Hindus moved from Pakistan to India and Muslims moved from India to Pakistan. Eventually in 1971, East Pakistan became the independent nation of Bangladesh in a short war against West Pakistan that was caused by many ethnic and economic factors.

HANDOUT 5 ► P.3 India Becomes an Independent Nation

STUDENT NAME: _____

DATE: _____

Answer the following questions, using the information you have gathered in your reading. Continue on the back of this page if you need additional space.

1. Define the following:

nationalism

nonviolent resistance

boycott

partition

2. How did Gandhi use nonviolent resistance to oppose British rule?

3. How did Pakistan and Bangladesh gain their independence?

4. Do you think that other nations would have been as likely to support Indian independence if leaders like Gandhi had not practiced nonviolent resistance? Explain.

The Elements of Film: Constructing Meaning Through Music and Visual Imagery

Enduring Understandings:

- Film is a visual and auditory medium.
- Camera placement and movement, lighting, color, pace, and sound are essential elements of film.
- Music and visual imagery combine in *Like Stars on Earth* to construct a message about the importance of compassion and the value of teaching to multiple intelligences.

Essential Questions:

- How do the elements of film, including the use of light, color, and sound, convey the central message of a film?
- How can music be used to construct meaning in film?
- In what ways can one person make a huge difference in someone else's life?

Notes to the teacher:

Like Stars on Earth brings the culture of India to life using vivid imagery and musical storytelling. Drawing on the traditions of Bollywood—the Indian film industry based in Mumbai—*Like Stars on Earth* tells the touching story of Ishaan, a young boy with dyslexia who struggles to find his place in an unforgiving school environment. Musical numbers, which are usually incorporated into Bollywood films, help illustrate and develop the special relationship between Ishaan and his caring teacher, Nikumbh. The power of Nikumbh's compassion for Ishaan is illustrated by the juxtaposition of light, color, and sound in musical scenes at the beginning of Ishaan's journey, in his old school, and at the end of his journey, in the new boarding school. By first identifying the central message of the film, then analyzing the use of the elements of film, students will improve their film literacy.

In **ACTIVITY 1**, students use a graphic organizer to identify and discuss the central message of the film. They are directed to pay particular attention to the musical scenes, which will provide a narrowed scaffold with which to analyze the film. By mapping the key people, ideas, and events in the film as they view it, students will learn to construct meaning from music and visual imagery.

In **ACTIVITY 2**, students identify and discuss the elements of film, including cinematography, or camera placement and movement, light, color, pace, and sound. They engage in cooperative learning activities to define and identify the use of various elements of film in the musical scenes of *Like Stars on Earth*. They also consider the importance of the use of animation in the film.

In **ACTIVITY 3**, students apply their understanding of the central message of the film and the elements of film to illustrate a particular musical scene through a storyboard exercise. The storyboard is like a comic-book version of a scene to be filmed, detailing such information as the characters in the scene, the camera angle to be used, and what the characters are saying and doing. The annotated storyboard that students produce in this activity will provide the assessment for the lesson. If you are artistic, create a storyboard yourself to use as an example; otherwise, locate some sample storyboards online to show students. (See Additional Resources, page 46.)

DURATION OF LESSON:

165 minutes to view film,
plus three additional class periods

ASSESSMENT:

Annotated storyboard
(graded using “storyboard rubric”)

Materials needed:

Copy of the film *Like Stars on Earth* and means for viewing

Photocopies for each student:

Handout 1: Circle map

Handout 2: Elements of film chart

Handout 3: Storyboard template

Storyboard grading rubric

Large poster paper and markers

Blank paper

LANGUAGE ARTS STANDARD

LEVEL III [GRADE 6–8]

STANDARD 9. Uses viewing skills and strategies to understand and interpret visual media

1. Understands a variety of messages conveyed by visual media (e.g., main concept, details, themes or lessons, viewpoints)
4. Understands the use of stereotypes and biases in visual media (e.g., distorted representations of society; imagery and stereotyping in advertising; elements of stereotypes such as physical characteristics, manner of speech, beliefs, and attitudes)
7. Understands reasons for varied interpretations of visual media (e.g., different purposes or circumstances while viewing, influence of personal knowledge and experiences, focusing on different stylistic features)

Procedure:

ACTIVITY 1: Identifying the main message

1. Prior to viewing the film, distribute the “circle map” graphic organizer.
 - a. Explain that the circle map will be used as a tool to help identify the main idea of the film *Like Stars on Earth*. The circle map is like a bull’s-eye that will help narrow down all the messages in the film into a central, main idea.
 - b. Draw a circle map on the board or poster paper.
 - c. Demonstrate how to add information to the circle map by writing down the most important people, ideas, and events in the center of the map, and less important people, ideas, and events in the outer loops. (Information that is more important is closer to the center of the map.) Tell students that they shouldn’t make quick decisions, but should watch the film for a while first. They will have time at the end of the film (or at the end of each day’s viewing, if seen over several class periods) to work on their maps. Reassure them that you will help them with unfamiliar names and spellings.
2. Tell students that they will now view the film *Like Stars on Earth* and take notes on key people, ideas, and events. Ask them to pay special attention to how music and animation are incorporated into the film.
3. Watch the film and have students complete the circle map. When musical numbers start, call students’ attention to them briefly. You may wish to have stu-

dents work in groups at the end of the film or individual viewing sessions.

4. Create a large circle map on the board. Ask students to share their notes on the key people, ideas, and events, and write down these suggestions in the appropriate column. Use this sorting process to discuss and narrow students’ ideas about the central message or theme of the film.

SUGGESTED ANSWERS:

Most important: Ishaan, Nikumbh, dyslexia

Secondary: Ishaan’s family, Ishaan’s art, school community, other teachers, music as a tool to tell the story, animation (Ishaan’s imagination)

Least important: Ishaan’s brother, Ishaan’s friend Rajan

(Note: These answers may be valued differently by different students. Don’t worry if you can’t achieve consensus. The value of this activity is to review the film and promote discussion, not to come up with the “right” answer.)

5. Remind students that you asked them to pay particular attention to the musical numbers as they watched the film. List the musical numbers on the board.

Scene 3: (*Jane Raho*) Getting ready

Scene 5: (*Mera jahan*) Day off

Scene 10: (*Maa*) First day at boarding school

Scene 12: (*Beja kum*) Difficulty with letters

Scene 14: (*Bum bum bole*) Introduction to Nikumbh

Scene 17: (*Taare zameen par*) Special school performance

Scene 22: Nikumbh helps Ishaan

Scene 25: (*Kholo*) Art medley

6. Discuss which musical scenes are most important, which are secondary, and which are least important. Identify three or four musical scenes that the class agrees are especially important for the central theme of the film. Add them to the circle map on the board.
7. Consolidate and transfer these suggestions to a large blank copy of the circle map on newsprint or poster paper that can remain somewhere visible throughout the lesson. This circle map should identify the key people, events, ideas, and central message that the class agrees upon. (This consolidation can be done by the teacher after class.)

ACTIVITY 2: The Elements of Film

1. Tell students that there are many elements of film that add to our understanding and enjoyment of a film. List the following elements on the board and explain each one:
 - Cinematography (camera placement and movement)
 - Lighting
 - Color
 - Pace
 - Sound
2. Break students into five groups and assign one group for each element. Provide one or two large sheets of blank paper to each group.

3. Ask students to work in their assigned groups to brainstorm about their assigned element. Tell them to write down everything they can think of to define or describe their term, including synonyms and antonyms. Tell them they may use bullet points or a web, as they prefer.

SUGGESTED BRAINSTORM OBSERVATIONS:

Cinematography – camera angles, placement for close-ups, wide-angles, panning shots, zooming in or out

Lighting – light, dark, soft, bright, direct, indirect, shadow, sun, natural, fluorescent

Color – soft, bright, warm, cool, shocking colors; black and white; color schemes; color of costumes, scenery, animation

Pace – speed at which the camera moves; speed at which events in the plot unfold; rhythm of the film

Sound – music, special effects, background noises, crowd noises, feelings evoked by sound.

4. After students have exhausted their brainstorming, have the groups write a definition of each term while the teacher writes the definition on the board. Allow time for other groups to add to and discuss the definition of each term.
5. Tell students that they will now watch three scenes from the film. Explain that as they watch each scene, students in each group will take notes on the use of the element that they defined. Make sure each student knows what to watch for; all the students in the lighting group, for example, will watch for and make note of

the use of lighting in each musical scene. Tell students that they should pay particular attention to the ways that their element helps convey meaning. *Examples:* A brightly lit scene conveys a happy message; bright colors indicate a vibrant environment; the camera angle makes the viewers feel like they are part of the scene.

6. Watch three musical scenes while students take notes.
7. Once viewing is complete, give each group a chance to meet briefly to compare notes. Then mix the groups up to create new groups, including one student from each of the original groups. Each new group should have one student from the lighting group, one from the color group, one from the cinematography group, etc.
8. Distribute **HANDOUT 2: The Elements of Film** to all students. Have students in each new group share their observations about the presence of each element. Students should fill in notes about each element as each student in their group reports.
9. Once students have completed their charts, discuss their findings as a class. Ask students from each group to describe how an element was used to convey meaning in the scene.
10. Remind students that this film has another special technique, animation, not used in most films. Tell them that the animation for this film was done with both computer graphics and a technique called Claymation; flat clay figures were filmed in such a way as to make them seem to move. Ask students to recall scenes in *Like Stars on Earth* in which anima-

tion was featured. (Students may recall schools of fish, dancing numbers and letters, an octopus, a peacock turning into a flower, parrot, hippo.) Ask: How did the animation add to your understanding of Ishaan or the main ideas of the film? (The animation shows his extraordinary imagination and how overwhelmed he felt by his difficulty in reading.)

ACTIVITY 3: Storyboards

1. Explain to students what a storyboard is (a series of four or more “snapshots” that map out every shot in a scene) and how it is used. If possible, show the students some examples of storyboards and reassure them that great artistic ability is less important than the ability to think through what is important and how the scene advances the story. Tell students that they will work individually to create an annotated storyboard which will illustrate the use of one element of film in one musical scene.
2. Distribute **HANDOUT 3**, the storyboard template. Tell students that they may choose a favorite scene in the film and illustrate its development in four frames of a storyboard. Annotate each scene in the storyboard by writing a two sentence explanation under each panel addressing how one or more of the elements of film (cinematography, light, color, pace, sound or animation) is used to illustrate the central message of the film in the shot.
3. Give students time to draw these four shots in their storyboard squares to illustrate the use of their chosen element of film.

4. Allow students to post their storyboards and do a gallery walk, or have them present their storyboards to the class as time permits.
5. Collect the storyboards and grade them using the storyboard rubric
6. (Optional) Assign students to small groups. Have each group act out one member's storyboard. Students should bring in props such as colorful clothing or music to help illustrate the chosen elements of film.

ADDITIONAL RESOURCES:

College of the Arts @ Ohio State University: Storyboard Samples and resources

<http://accad.osu.edu/womenandtech/Storyboard%20Resource/>

The Film Foundation: National Film Study Standards

<http://www.storyofmovies.org/pdfs/NationalFilmStudyStandards.pdf>

Michael Dembrow: The Elements of Film

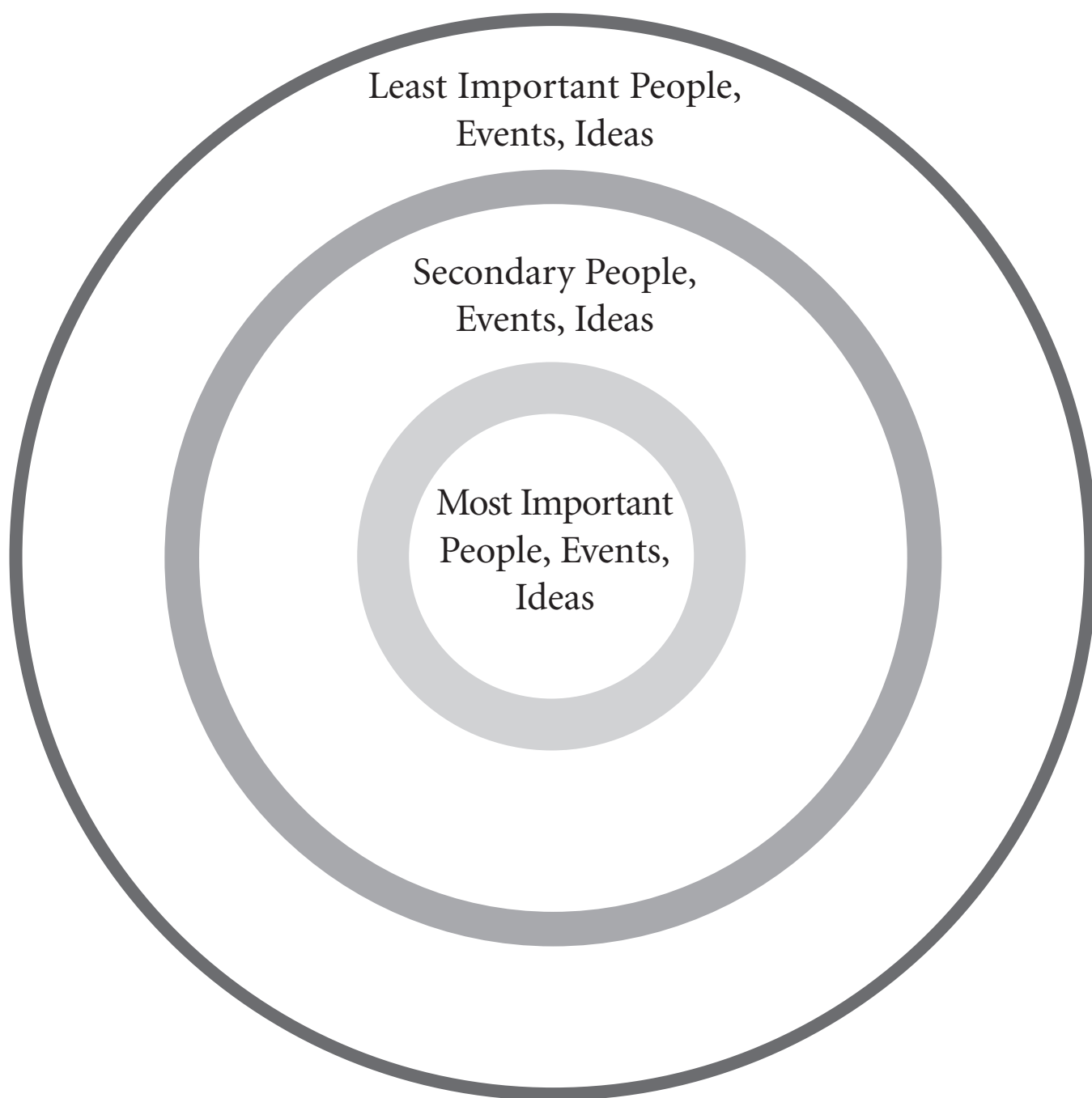
<http://spot.pcc.edu/~mdembrow/elements.htm>

Interview with animator Dhimant Vyas

<http://www.allaboutanimation.com/blog/animators/interview-with-dhimant-vas-the-making-of-tzps-clay-animation/>



HANDOUT 1 Circle Map for Film Viewing



HANDOUT 2

The Elements of Film

	Cinematography (camera angle, movement)	Lighting	Color	Pace	Sound (music)
Scene Name: Taare Zameen Par					
Scene Name: Bheja Kum					
Scene Name: Kholo Kholo					

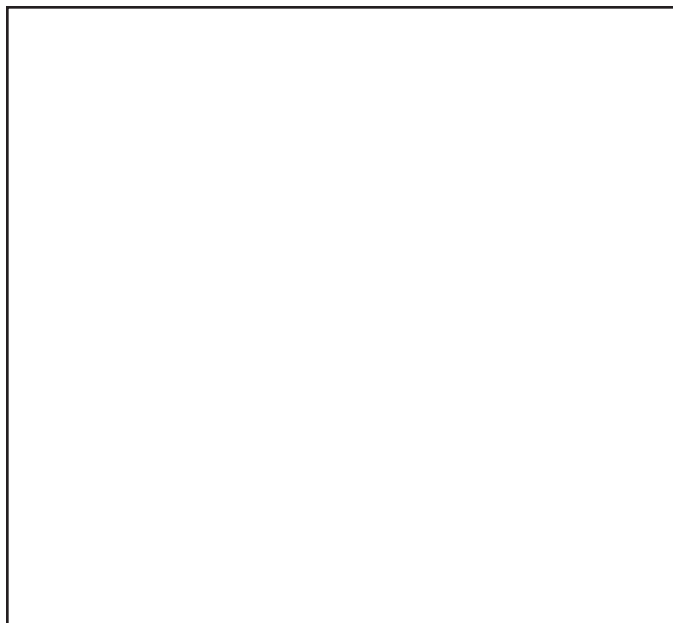
HANDOUT 2 ► ANSWERS

The Elements of Film

	Cinematography (Camera angle, placement and movement)	Lighting (Use of natural vs. artificial light, bright, dark)	Color (Costumes, scenery, animation)	Pace (Speed of camera movement and unfolding story)	Sound (music) (Feeling of music)
Scene Name: Taare Zameen Par	Sweeping camera movement (showing large crowd) Camera placed in the middle of the crowd of people Camera follows Nikumbh on his journey (contrast between crowds, and Nikumbh alone)	Bright, natural light	Many different colors Contrast between colorful crowd and bland tennis match	Slow motion Gradual pace	Slow, longing music
Scene Name: Bheja Kum	Camera follows Ishaan's point of view, contrast between Ishaan all alone and classmates viewed as a group	Dark classroom	Bland, dark colors Scary, animated "spider" letters	Fast paced, camera jumping around to different scenes	Angry, loud music
Scene Name: Kholo Kholo	Close, personal point of view (camera focuses on faces of characters, up close)	Bright, natural light	Many different colors in art. Brief animation as Ishaan plans his painting.	Slow. Illustrates creation process.	Joyful, uplifting, happy.

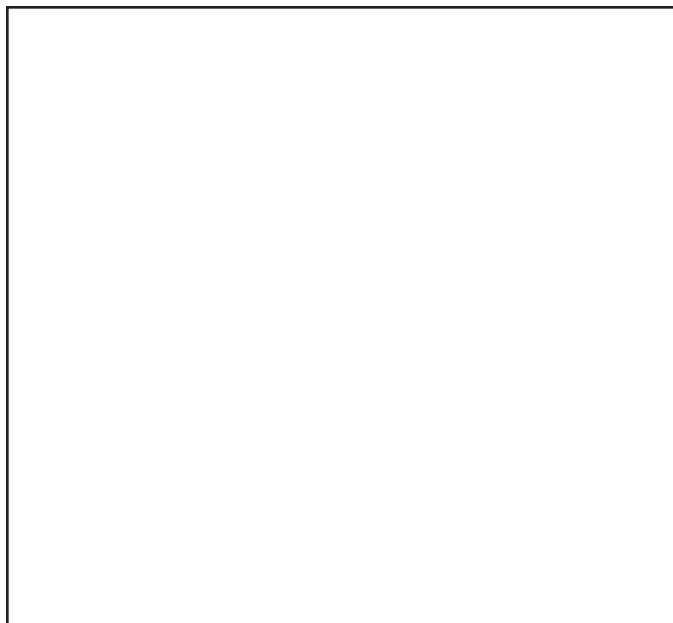
Storyboard

SHOT 1



ANNOTATION

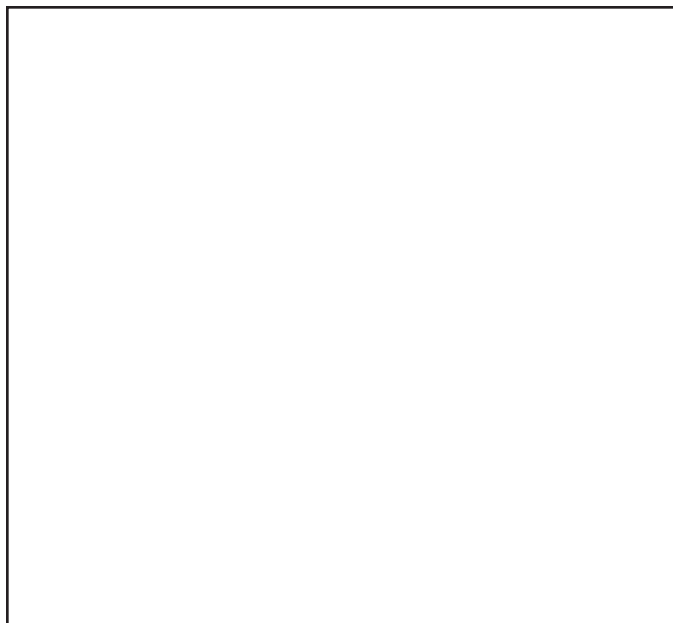
SHOT 2



ANNOTATION

Storyboard

SHOT 3



ANNOTATION

SHOT 4



ANNOTATION

Storyboarding Rubric

CATEGORY	0-1	1-2	2-3	3-4
Illustration of four shots from one scene	None of the shots are completely illustrated.	Fewer than four shots are illustrated, and they lack detail and accuracy.	All four shots are illustrated, but there is minimal detail and accuracy.	All four shots are illustrated with excellent detail and accuracy.
Analysis and illustration of one element of film	No clear illustration of any elements of film.	Few or no illustrations of one element of film or too many elements are represented.	One element is represented, but there is minimal detail and accuracy.	One element of film is well illustrated with excellent detail and accuracy.
Annotated explanation of use of the element of film in each shot	No annotation included.	Short annotation (less than two sentences long), with little or no detailed explanation, poor spelling and grammar.	Annotation is short, less than two sentences long, with minimal detail and accuracy. Few spelling and grammar errors.	Complete, detailed, and accurate annotation with perfect grammar and spelling.

Comments:	Grade: _____ / 12
------------------	---------------------------------

Making Beauty Out of Nonsense

Enduring Understandings:

- Those who see the world differently from most people have often made the most significant contributions to human history.
- Those with different views or perspectives on the world are to be nurtured and celebrated for those differences.

Essential Questions:

- What feelings might someone experience because of dyslexia?
- How does dyslexia make someone different from people who do not have dyslexia?
- How are Ishaan's unique perspective and experience of the world strengths for him?
- How might other disabilities provide people with unique perspectives and gifts?

Notes to the teacher:

This lesson focuses on the classroom scene in which Ram Shankar Nikumbh speaks to the art class about the famous history makers who struggled with reading and writing and on the following scene in which Ishaan creates a working paddle boat to the amazement of his peers (1:48:47–1:57:58). If possible, show this clip (roughly nine minutes) again before the lesson begins. A second viewing will not only refresh the plot in students' minds, but also allow them to analyze the unspoken emotion throughout the scene.

The first activity is a brief review of the main ideas of the film. Activity 2 expands this focus with a group discussion of the questions on **HANDOUT 1**. For students who would benefit from some extra guidance during the viewing, you may wish to review this handout with them before showing the film clip. Otherwise, pass it out afterward for individual or group completion, or you may choose to use the questions from the handout for a teacher-led discussion with the whole class.

In the third activity, students read and discuss the poem "Jabberwocky" from Lewis Carroll's *Through the Looking-Glass, and What Alice Found There*. Students may be familiar with the story from their exposure to the popular film versions of *Alice in Wonderland*. Few will know many details of the life Lewis Carroll, whose real name was Charles Dodgson: his unexceptional work as a mathematician and his boredom with it, his several inventions, or the fact that he suffered from a stammer. Depending on the amount of time available, you may wish to give students a more detailed picture of Carroll's

life before introducing the poem “Jabberwocky.” Details of his biography are readily available on the Internet. More information on Lewis Carroll can be found online, as well as speculations on the meaning of the neologisms that Carroll used in “Jabberwocky.”

The fourth activity is modeled after Ram Shankar Nikumbh’s encouragement to his students to go outside and create art from “rock, wood, junk, anything.” Steps 1–3 should be completed as a full class, but the poetic composition can be done in class or at home, depending on time constraints. Ideally, students should have the opportunity to share their compositions after they have finished, celebrating the creativity and uniqueness they have exercised.

As with any lesson, you should be alert to possibly sensitive issues, particularly if you have a child in the classroom with some of Ishaan’s learning differences.

DURATION OF LESSON:

One or two class periods, plus time for sharing student compositions

ASSESSMENT:

Student responses on handout and participation in class discussion

Student poems and prose compositions using neologisms.

Materials needed:

Viewing capabilities, if a review of the film clip is desired or needed

Chalkboard, white board, or large paper for brainstorming

Paper and writing utensils for student compositions

LANGUAGE ARTS STANDARDS

LEVEL III [GRADE 6–8]

STANDARD 1: Uses the general skills and strategies of the writing process

1. Prewriting: Uses a variety of prewriting strategies (e.g., makes outlines, uses published pieces as writing models, constructs critical standards, brainstorming, builds background knowledge)

STANDARD 2: Uses the stylistic and rhetorical aspects of writing

1. Uses descriptive language that clarifies and enhances ideas (e.g., establishes tone and mood, uses figurative language, uses sensory images and comparisons, uses a thesaurus to choose effective wording)

STANDARD 6: Uses reading skills and strategies to understand and interpret a variety of literary texts

6. Understands the use of language in literary works to convey mood, images, and meaning (e.g., dialect; dialogue; symbolism; irony; rhyme; voice; tone; sound; alliteration; assonance; consonance; onomatopoeia; figurative language such as similes, metaphors, personification, hyperbole, allusion; sentence structure; punctuation)

STANDARD 9: Uses viewing skills and strategies to understand and interpret visual media

1. Understands a variety of messages conveyed by visual media (e.g., main concept, details, themes or lessons, viewpoints)

Procedure:

ACTIVITY 1: Reviewing the Film

Before looking closely at the classroom scene, give students a few minutes to respond to the film as a whole. You might ask the following questions.

1. Why does Ishaan's father respond to him so harshly throughout the film? How does this response make Ishaan feel? (His father thinks Ishaan does poorly in school because he is lazy or naughty. This makes Ishaan feel guilty about his inability to do well.)
2. Ishaan's brother, Yohan, does very well in school and earns his parents' praise. How does Yohan's success affect Ishaan? (It makes Ishaan feel like he is less than Yohan, and perhaps that his parents love Yohan more.)
3. Why do Ishaan's parents send him to boarding school? Why does Ishaan *think* they are sending him there? (They send him there because they hope it will give him the chance to succeed. He thinks they send him there because he has done something bad and is being punished.)

ACTIVITY 2: Analyzing Ishaan's Emotions

1. If you have decided to distribute **HANDOUT 1** to the students before they see the film clip, pass it out and review it with the class.
2. Show students the film clip (1:48:47–1:57:58).

3. If you haven't already done so, distribute **HANDOUT 1**. Give students 10–15 minutes after the clip is finished to complete the handout individually or in small groups.
4. Invite students to share their responses to the questions on the handout. Encourage them to draw connections between Ishaan's experience with dyslexia and other experiences in which the students or people they know have felt similar feelings.

SUGGESTED ANSWERS:

1. fear, shame, embarrassment, wanting to hide
2. downcast head, wide eyes, loud heartbeat
3. He is afraid he will be made fun of or scolded for his inability to read and write. He is ashamed that he cannot do something that everyone else in class can do.
4. Ishaan feels uniquely alone in his inability to read and write. Since these skills are thought of as something everyone can and should be able to do, he feels like there must be something terribly wrong with him since he cannot.
5. He is trying to show them that reading is a skill you must learn to develop, just like any other skill. The fact that the other students cannot read the backward words shows that they, too, have disabilities and weaknesses. Ishaan is not alone in his struggle.
6. He wants them to realize that many people who had "unique" challenges have gone on to do amazing things in the world, sometimes in spite of those challenges, and sometimes because of them.
7. Some residual shame and fear, some relief, some realization that he is not alone in the world. He may feel some sense of acceptance from his teacher, but it is not enough to overcome the rejection he has faced all his life from everyone else.
8. Ishaan's bag of "junk" was one of the things people made fun of. Now he uses those very objects to create something that people admire and celebrate.
9. Even though his classmates like his boat, Ishaan perhaps still worries about how much he can really fit in with those around him. He also perhaps is still upset because he feels like his parents have rejected him.

ACTIVITY 3: "Jabberwocky"

1. Pass out copies of Lewis Carroll's "Jabberwocky" (**HANDOUT 2**) to students. Invite one or more volunteers to read the poem aloud.
2. Explain that "Jabberwocky" is often characterized as a nonsense poem, since so many of the words Carroll employs are his own creations. Ask students to identify as many neologisms (made-up words) as they can. Discuss with students how, even though they don't know the meanings of individual words, the poem as a whole seems to create a meaning and an image of its own.

3. Ask students to make connections between Lewis Carroll and his poem, on the one hand; and Ishaan and the world he creates, on the other. (Ishaan and Carroll both see things that other people don't see. Ishaan and Carroll both have a disability that keeps them from communicating exactly as other people do. Ishaan and Carroll both use their unique perspectives to create things of beauty that awe and inspire those around them.)

ACTIVITY 4: Create Your Own Jabberwocky

1. Explain to students that they will be following Ram Shankar Nikumbh's directions to his class to create something out of "anything," especially unconventional material. Like Carroll, students will create their own nonsense poem or story.
(You may wish to comment, however, that just as in "Jabberwocky," using neologisms doesn't mean their compositions will have no meaning.)
2. Have students compile a list of around 20 neologisms on the board. (Aside from questions of propriety, no student's entry should be rejected.) If students are having a hard time creating new words, they may wish to combine syllables of existing words to create new ones. Definitions of the new words should not be solicited or offered, so as to maintain the open meaning of the words for each student.
3. Once the list has been completed, have students pull out paper and a writing utensil. Explain that they may choose to create either a poem or a piece of prose, but their composition should tell a story (as does "Jabberwocky"). It can be a simple story or a complex story, but the composition should use as many of the neologisms on the class list as possible. (You may require students to use them all. Suggested length for the composition would be three to four short stanzas, or two paragraphs.)
4. Depending on time constraints, have students finish their compositions in class, or assign them for homework.
5. Discuss with students why these neologisms (newly coined words) work. (They hold the place of nouns, verbs, adjectives, and other parts of speech, because students can recognize cues from words they already know, such as plural endings, adjectival endings, etc.)

FOLLOW-UP ACTIVITY: Celebrating the "Nonsense"

1. After students have completed their compositions (perhaps at the beginning of the next class), invite them to read their compositions aloud. You may ask listeners for guesses as to the meaning of the stories, and then ask the author for the meaning of the story.
2. After students have had the opportunity to share, point out to students how, even though they were using the same vocabulary, the words had a different meaning in each story. Moreover, even within one story, the words had different meanings for each listener. Explain that each interpretation of the story reveals a different perspective on the world, and that, just because one listener's interpretation does not match the author's intended meaning, it does not mean that the listener's interpretation is wrong or invalid.

HANDOUT 1 ► P.1 Analyzing a Character's Emotion

Answer the following questions about Ishaan in *Like Stars on Earth*.

1. What emotions do you imagine Ishaan is feeling as Ram Shankar Nikumbh starts to tell the story of the boy who can't read or write?
2. What visual details from Ishaan's appearance and behavior give you this impression?
3. Why, do you imagine, is Ishaan feeling this way?
4. We all have different talents, strengths, and abilities. One person may play the piano well, another may excel at soccer or swimming, and yet someone else might be a talented artist. We accept the fact that one person cannot do everything, and that some people possess skills that others do not. Why then, is Ishaan so embarrassed about the fact that he cannot read?
5. Why does Ram Shankar Nikumbh write his name backward on the blackboard? What is he trying to show his students about reading and writing?

HANDOUT 1 ► P.2 Analyzing a Character's Emotion

6. Why does Ram Shankar Nikumbh give so many examples of famous people who have struggled with reading, writing, and school studies? What does he want the students to realize about these people who were different from their peers?

7. What do you imagine Ishaan is feeling when Ram Shankar Nikumbh keeps him after class and tells him about his own difficulties with reading and writing? Do his feelings change from the beginning of class? Why or why not?

8. Outside at the pond, Ishaan uses all the scraps he has collected in his little bag to make a working paddle boat, much to the amazement and admiration of his peers. Why is it significant that he uses these bits of “junk” to create an object of beauty?

9. Even as his classmates celebrate his invention, Ishaan seems sad and dejected. Why do you think he still feels this way? Who in his life has still not learned to celebrate and accept his differences?

HANDOUT 2

Jabberwocky²

By Lewis Carroll

'Twas brillig, and the slithy toves
Did gyre and gimble in the wabe:
All mimsy were the borogoves,
And the mome raths outgrabe.

“Beware the Jabberwock, my son!
The jaws that bite, the claws that catch!
Beware the Jubjub bird, and shun
The frumious Bandersnatch!”

He took his vorpal sword in hand:
Long time the manxome foe he sought —
So rested he by the Tumtum tree,
And stood awhile in thought.

And, as in uffish thought he stood,
The Jabberwock, with eyes of flame,
Came whiffing through the tulgey wood,
And burbled as it came!

One, two! One, two!
And through and through
The vorpal blade went snicker-snack!
He left it dead, and with its head
He went galumphing back.

“And, has thou slain the Jabberwock?
Come to my arms, my beamish boy!
O frabjous day! Callooh! Callay!”
He chortled in his joy.

'Twas brillig, and the slithy toves
Did gyre and gimble in the wabe;
All mimsy were the borogoves,
And the mome raths outgrabe.

² from *Through the Looking-Glass, and What Alice Found There* © Public Domain

Determining Your Grade: Calculating Percents

Enduring Understandings

- Determining your average in a class requires knowledge of fractions, decimals, and percents.
- Fractions, decimals, and percents are all parts of a whole (parts of 100).

Essential Questions

- In grading, when we have the number of correct answers and the total number of questions, how do we determine a simple percentage score for correct answers?
- When we have several percentages, how do we calculate a grade average?
- When assignments are weighted differently, how do we calculate a grade average?

Notes to the teacher

For many students, quarterly or semester grades are something of a mystery, even a surprise. The purpose of this lesson is to help students understand how teachers derive the student averages for their classes. The goal of the first activities is to help students understand that fractions, decimals, and percents are all parts of a whole (100). Students will work with the concept of converting fractions to decimals and percents. This will be related directly to the methods teachers use to determine individual assignment grades. Later activities will allow students to determine their class average using several assignments that are weighted differently. A review of finding a mean will be necessary before beginning this activity.

Prior to photocopying **HANDOUT 1** for the class, you will need to shade in the “hundred” grids to represent the number(s) that you want. Reproduce as many grids as necessary to help your students understand the concept that a number can be written as a fraction, decimal, or percent. This will depend on your students’ experience and comfort level with these terms.

DURATION OF LESSON

One or two class periods

ASSESSMENT

Handout 1: Students will demonstrate the ability to express numbers as fractions, decimals, and percents.

Handout 2: Students will demonstrate the ability to calculate a percentage score from a fraction of number correct over total problems.

Handout 3: Students will demonstrate the ability to calculate a grade average from several percentages by averaging grades and applying assignment weight (decimal) to each grade category.

Materials needed

Pencils

Calculators

MATH STANDARDS

LEVEL III [GRADE 6–8]

STANDARD 2. Understands and applies basic and advanced properties of the concepts of numbers

1. Understands the relationships among equivalent number representations (e.g., whole numbers, positive and negative integers, fractions, ratios, decimals, percents, scientific notation, exponentials) and the advantages and disadvantages of each type of representation
6. Understands the concepts of ratio, proportion, and percent and the relationships among them
7. Understands the concepts of ratio, proportion, and percent and the relationships among them

STANDARD 3. Uses basic and advanced procedures while performing the processes of computation.

1. Adds, subtracts, multiplies, and divides rational numbers
2. Adds and subtracts fractions with unlike denominators, multiplies and divides fractions

STANDARD 6. Understands and applies basic and advanced concepts of statistics and data analysis.

1. Understands basic characteristics of measures of central tendency (i.e., mean, mode, median)

STANDARD 9. Understands the general nature and uses of mathematics

1. Understands that mathematics has been helpful in practical ways for many centuries

Procedure

1. If possible, show students the opening scene of *Like Stars on Earth* in which Ishaan's grades are read aloud by his teachers. Ask students how they think he felt while this happened. Remind students of the importance that Ishaan's poor grades played in his transfer to the boarding school. Ask students if they feel that Ishaan understands how teachers determine his grades. Ask students if they themselves know how teachers determine their grades for their classes.
2. Discuss with students how fractions, decimals, and percents are all parts of a whole (100) and how knowledge of fractions, decimals, and percents is necessary in determining a grade average.
3. Distribute copies of **HANDOUT 1**. Work through the first grid with the class, having students write the fraction, decimal, and percent equivalents for the number of squares you have shaded. Then have them complete the remaining hundred grids. Check to be sure they understand the concepts and provide help as necessary for students who experience difficulty.
4. Distribute **HANDOUT 2**. Review with students how to convert a fraction to a decimal and then to a percent without using a hundred grid as a guide, using the first page of the handout. Focus on dividing numerators by denominators, thereby making a decimal, and then converting a decimal to a percent. Depending on their abilities and your usual practice, students can either use calculators or do the arithmetic by hand.

Teacher key for **HANDOUT 2, PAGE 1**

Number Correct Total Possible	Fraction	(numerator ÷ denominator)	Decimal	x 100	Percent
19/20	19/20	19 ÷ 20	0.95	X 100	95%
33/35	33/35	33 ÷ 35	0.94	X 100	94%
67/100	67/100	67 ÷ 100	0.67	X 100	67%
35/35	35/35	35 ÷ 35	1.0	X 100	100%
18/24	18/24	18 ÷ 24	0.75	X 100	75%
7/10	4/10	4 ÷ 10	0.4	X 100	40%
21/25	21/25	21 ÷ 25	0.84	X 100	84%

5. Ask students to draw conclusions about how to make a decimal into a percent by moving the decimal point two places to the right.
6. If time permits, have them do the second page of the handout where different information from the chart is missing. Ask students if it is possible for two students to have the same percentage but a different fraction. (For example, 18/24 and 6/8 both equal 75%.) This may lead to a discussion about fractions in simplest form.

Teacher Key for **HANDOUT 2, PAGE 2**

Number Correct Total Possible	Fraction	(numerator ÷ denominator)	Decimal	x 100	Percent
14/20	14/20	14 ÷ 20	0.7	X 100	70%
79/100	79/100	79 ÷ 100	0.79	X 100	79%
17/30	17/30	17 ÷ 30	0.57	X 100	57%
81/100	81/100	81 ÷ 100	0.81	X 100	81%
95/100	95/100	95 ÷ 100	0.95	X 100	95%
12/15	12/15	12 ÷ 15	0.8	X 100	80%
60/100	60/100	60 ÷ 100	0.6	X 100	60%

Lesson 4 MATHEMATICS

7. Distribute **HANDOUT 3**. Explain to students how teachers average grades and weight them to determine a final grade for the class. Review with students how to determine an average so that they can complete the handout.

Teacher Key for **HANDOUT 3**

due date	assignment type	points earned	points possible	grade (%)
19 APRIL	HOMEWORK	5	5	100
21 APRIL	HOMEWORK	5	5	100
22 APRIL	HOMEWORK	3	5	60
25 APRIL	QUIZ	20	25	80
26 APRIL	HOMEWORK	2	5	40
30 APRIL	PROJECT	38	50	76
1 MAY	HOMEWORK	5	5	100
4 MAY	HOMEWORK	3.5	5	70
5 MAY	TEST	49	56	88
6 MAY	HOMEWORK	5	5	100
9 MAY	HOMEWORK	4	5	80
10 MAY	HOMEWORK	4	5	80
13 MAY	HOMEWORK	5	5	100
14 MAY	QUIZ	26	30	87
15 MAY	HOMEWORK	2	5	40
17 MAY	HOMEWORK	0	5	0
19 MAY	QUIZ	9	12	75
23 MAY	HOMEWORK	3	5	60
24 MAY	HOMEWORK	5	5	100
25 MAY	HOMEWORK	5	5	100
26 MAY	HOMEWORK	5	5	100
29 MAY	TEST	41	55	75

FINAL GRADE

$$\begin{aligned}
 & (77) (0.05) = 4 \\
 & + (81) (0.30) = 24 \\
 & + (82) (0.40) = 33 \\
 & + (76) (0.25) = 19 \\
 & \hline
 & 80\%
 \end{aligned}$$

HANDOUT 1 Expressing Numbers as Fractions, Decimals, and Percents

NAME: _____

DIRECTIONS: For each grid, express the number as a fraction, a decimal, and a percent.

Fraction _____

Decimal _____

Percent _____

Fraction _____

Decimal _____

Percent _____

Fraction _____

Decimal _____

Percent _____

Fraction _____

Decimal _____

Percent _____

HANDOUT 2 Calculating an Assignment Grade

NAME: _____

In most classes, teachers determine a grade on an assignment by taking the total number of points earned and dividing it by the number of points possible for the assignment. In this activity, you will determine a student's test grade by following the procedure in the box below.

$$\begin{array}{ccccccc} & \text{Fraction} & \longrightarrow & \text{Decimal} & \longrightarrow & \text{Percent} & \\ \text{Number correct} & & & & & & \\ \text{Total points possible} & = \frac{15}{20} = 15 \div 20 = 0.75 \times 100 = 75\% & & & & & \end{array}$$

Number Correct Total Possible	Fraction	(numerator ÷ denominator)	Decimal	x 100	Percent
19/20	19/20			X 100	
33/35	33/35			X 100	
67/100	67/100			X 100	
35/35	35/35			X 100	
18/24	18/24			X 100	
7/10	7/10			X 100	
21/25	21/25			X 100	

Which of these scores was a likely grade for Ishaan before he moved to the boarding school?

Number Correct Total Possible	Fraction	(numerator ÷ denominator)	Decimal	x 100	Percent
14/20	14/20			X 100	
				X 100	79%
		17 ÷ 30		X 100	
			0.81	X 100	
				X 100	95%
		12 ÷ 15		X 100	
			0.6	X 100	

HANDOUT 3 Calculating Semester Grades

NAME: _____

In Ishaan's math class, the grade for the semester is made up of homework grades, quiz grades, test grades, and project grades. Homework counts for 5% of the total grade. Quizzes count for 30% of the total grade. Tests count for 40% of the total grade, and projects count for 25% of the total grade.

The following is a page from a month of the teacher's grade book for one of the students in Ishaan's class. First, calculate the grade in percent for each assignment. Then use the percentages to determine the final class grade by following the directions in the box below. *Round all numbers to the nearest whole number or whole percent.*

due date	assignment type	points earned	points possible	grade (%)
19 APRIL	HOMEWORK	5	5	
21 APRIL	HOMEWORK	5	5	
22 APRIL	HOMEWORK	3	3	
25 APRIL	QUIZ	20	25	
26 APRIL	HOMEWORK	2	5	
30 APRIL	PROJECT	38	50	
1 MAY	HOMEWORK	5	5	
4 MAY	HOMEWORK	3.5	5	
5 MAY	TEST	49	56	
6 MAY	HOMEWORK	5	5	
9 MAY	HOMEWORK	4	5	
10 MAY	HOMEWORK	4	5	
13 MAY	HOMEWORK	5	5	
14 MAY	QUIZ	26	30	
15 MAY	HOMEWORK	2	5	
17 MAY	HOMEWORK	0	5	
19 MAY	QUIZ	9	12	
23 MAY	HOMEWORK	3	5	
24 MAY	HOMEWORK	5	5	
25 MAY	HOMEWORK	5	5	
26 MAY	HOMEWORK	5	5	
29 MAY	TEST	41	55	

TO DETERMINE FINAL GRADE

(HOMEWORK AVERAGE) (0.05)
+ (QUIZ AVERAGE) (0.30)
+ (TEST AVERAGE) (0.40)
+ (PROJECT AVERAGE) (0.25)

FINAL GRADE () (0.05) =
+ () (0.30) =
+ () (0.40) =
+ () (0.25) =

GRADE

How the Brain Works

Enduring Understandings:

- Different parts of the human brain work together to interpret and process information.
- Each brain function can be traced to specific areas in the brain.
- Everyone's brain is unique, allowing for a diverse society.

Essential Questions:

1. What are the major parts of the brain and how do they work together?
2. How does the brain process information?
3. How do brain disorders affect brain processing?

Notes to the Teacher:

Like Stars on Earth portrays a young boy learning to cope with dyslexia. Dyslexia is a condition that affects how the brain processes written language, a condition due largely to abnormal brain wiring. The attached lesson is designed to introduce students to normal brain structure and function. Also, this lesson will provide students the opportunity to analyze their brain functions. Specifically, students' written language skills will be challenged as a means to gain appreciation of what a dyslexic student may experience.

The first and second sections of this lesson familiarize students with normal brain anatomy and physiology. The students learn about the four main parts of the brain and their functions. The third section of the lesson engages students in an activity that challenges how their brain processes information. Each activity can be conducted in a normal classroom setting. Students will need to work in pairs.

To prepare for activities, review information ahead of time and have all materials prepared before class begins. Some of the activities in the third section will be challenging for students to complete. Remind students that failure to complete certain tasks does not mean they have a brain disorder or lack intelligence. Also, students should not practice activities in the third section ahead of time. Finally, be sensitive to students in the class who have diagnosed brain disorders.

DURATION OF LESSON:

Two or three class periods

Assessment:

Participation in class discussion

Completion of Handouts 3 and 4

Materials:

Photocopies of the following handouts for each student:

Handout 1: Brain Structure and Function

Handout 2: Information Processing in the Brain

Handout 3: Analyzing Your Brain

Handout 4: Brain-teaser Exercises

Two sheets of unlined paper

Colored pencils or markers

Pens

Stopwatch

Rulers

Graph paper

SCIENCE STANDARDS

STANDARD 5. Understands the structure and function of cells and organisms

LEVEL III (GRADES 6–8)

4. Knows that multicellular organisms have a variety of specialized cells, tissues, organs, and organ systems that perform specialized functions (e.g., digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, protection from disease) and that the functions of these systems affect one another.

STANDARD 11. Understands the nature of scientific knowledge

LEVEL III (GRADES 6–8)

1. Understands the nature of scientific explanations (e.g., use of logically consistent arguments; emphasis on evidence; use of scientific principles, models, and theories; acceptance or displacement of explanations based on new scientific evidence)

STANDARD 12. Understands the nature of scientific inquiry

LEVEL III (GRADES 6–8)

1. Knows that there is no fixed procedure called “the scientific method,” but that investigations involve systematic observations; carefully collected, relevant evidence; logical reasoning; and some imagination in developing hypotheses and explanations
3. Designs and conducts a scientific investigation (e.g., formulates hypotheses, designs and executes investigations, interprets data, synthesizes evidence into explanations)
4. Identifies variables (e.g., independent, dependant, control) in a scientific investigation
6. Uses appropriate tools (including computer hardware and software) and techniques to gather, analyze, and interpret scientific data
7. Establishes relationships based on evidence and logical argument (e.g., provides causes for effects)

Procedures:

ACTIVITY 1: An Introduction to Brain Structure and Function

1. Place students into groups of three. For each group, assign a recorder, a timer, and a speaker. Tell students they have three minutes to list all of the functions of the brain they can think of. The recorder should write the group's responses and the timer should keep track of time.
2. Once three minutes are up, have the speaker for each group identify four items on the group's list. Write the list on the board. Direct students to save their lists because they will need them in a few minutes.
3. Distribute **HANDOUT 1: Brain Structure and Function**. Allow each student to read over it and then call on three students to come to the front of the class. Have the first student name a structure, the second student explain the function, and the third student provide an example of the function. Call another set of three students to the front of the class to complete this activity for another area of the brain. Continue doing this until all brain structures and functions have been reviewed.
4. Return to the list generated in part one of this activity. Ask students if they can identify which portion of the brain is responsible for performing each activity. Give students a few minutes to review their list and assign brain structures. Record students' answers on the board. Discuss whether students correctly matched the brain structure to its function. Use this as a basis for stressing the importance for understanding brain structure and function.

ACTIVITY 2: Information Processing and the Brain

1. Distribute colored pencils or markers and one sheet of unlined paper to each student.
2. Have students draw and color the four major sections of the brain. Each student should label each section of the brain and identify its function.
3. Distribute **HANDOUT 2: Information Processing in the Brain**. Allow students a few minutes to read over the information or read aloud together as a class.
4. Call on one student to summarize the first section (Overview) of **HANDOUT 2**. Call on another student to summarize the second section (Left and Right Sides of the Brain). Call on a different student to summarize the third section (Different Brains). Hold a class discussion using the following questions:
 - a. What role does the spinal cord have in information processing? (The brain receives information and sends out commands to other parts of the body through the spinal cord.)
 - b. Identify activities unique to the left side of the brain. (Deals with language processing, sequential thinking, calculating)
 - c. Identify activities unique to the right side of the brain. (Deals with visual processing, emotions, and nonverbal reasoning)
 - d. Why is it important that people have brains that are not identical? (Answers may vary. Encourage students to see that a variety of skills and thought patterns enriches society.)

5. Distribute **HANDOUT 3: Analyzing Your Brain**. Have students read the directions on Page 1 and then complete the tables. When they finish, discuss with the class about Ishaan's strengths and weaknesses. Make sure students understand that all humans have both strengths and weaknesses. If you are familiar with Howard Gardner's research on multiple intelligences, you may wish to share some of his insights with students.
6. Ask students to turn to Page 2 of the handout. Reassure them that information that they put down about themselves will be shared only voluntarily, so they should not be afraid to be honest. Allow them time to complete the tables and then ask for volunteers to share answers.
7. Ask students to complete the questions on Page 3 of the handout. They should see that Ishaan is stronger at right-brain activities. Students may have suggestions from their own experiences of methods that might work better for him. Again, ask for volunteers to discuss only personal insights on the third question.

ACTIVITY 3: Brain-teaser Exercise

1. Arrange students in pairs. Distribute one sheet of unlined paper, a sheet of graph paper, a pen, and a ruler to each student. Be sure each pair of students has a stopwatch. Caution students that they will be doing some activities that call for them to speak. Remind them to speak softly so as not to disturb the next person.
2. Pass out **HANDOUT 4: Brain-teaser Exercises**. Review the directions with students. Have students complete Part I of the handout. Monitor students as they complete the exercises.
3. Once students complete all tasks in Part I, they can move on to Parts II and III. Parts II and III can be completed for homework if there is not enough time in class.
4. Have students discuss their results with the class.



ANSWERS FOR HANDOUT 3, PART 3, QUESTION 1:

Task Number	Parts of the Brain Used	Right or Left Brain Activity
1	CEREBELLUM CEREBRUM	RIGHT
2	CEREBELLUM CEREBRUM	RIGHT
3	CEREBELLUM CEREBRUM	RIGHT
4	CEREBELLUM CEREBRUM	RIGHT
5	CEREBELLUM CEREBRUM	LEFT
6	CEREBELLUM CEREBRUM	LEFT
7	CEREBELLUM CEREBRUM	LEFT

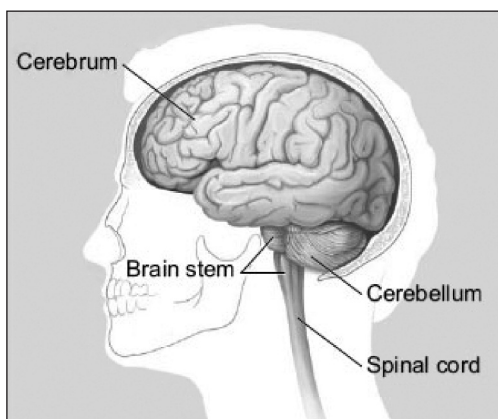
NOTE: The answers above are suggested answers for question one. Students may also answer that they used their brain stem during these activities, because they had to breathe and have a heartbeat to conduct these tasks. As a result, the brain stem would also be an acceptable answer for the parts of the brain used.

EXTENSION ACTIVITIES:

1. Have students research different brain disorders. The disorders can include Alzheimer's disease, dysgraphia, dyslexia, Parkinson's disease, or any disorder affecting the brain that students can think of. Have them put together a poster or PowerPoint presentation to share with the class.
2. Assign an essay summarizing the different parts of the human brain and their functions.
3. Have students research the types of brains found in humans, fish, and insects. Students will write an essay in which they explain the similarities and differences in the brain structures and brain functions of different kinds of animals.

HANDOUT 1 Brain Structure and Function

The outer brain can be divided into three main sections: the cerebrum, the cerebellum, and the brain stem. The inner brain is called the diencephalon. Each section has a specific responsibility. These sections work together to allow humans to perform daily functions.



**The main parts of the outer brain
above the spinal cord**

The Outer Brain

Cerebrum

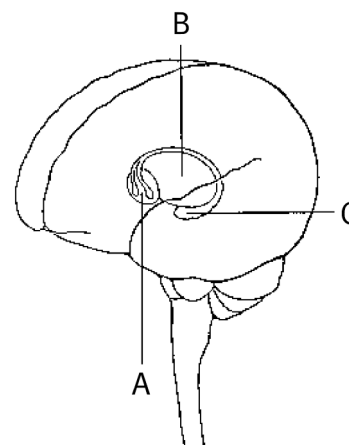
Essential for planning, learning, voluntary movements, and sensory perception

Cerebellum

Coordinates movement, balance, and motor skills

Brain Stem

Regulates breathing, heart rate, and digestion



**The main parts of the inner brain,
or diencephalon**

The Inner Brain

Diencephalon (DYE-en-SEPH-uh-lon)

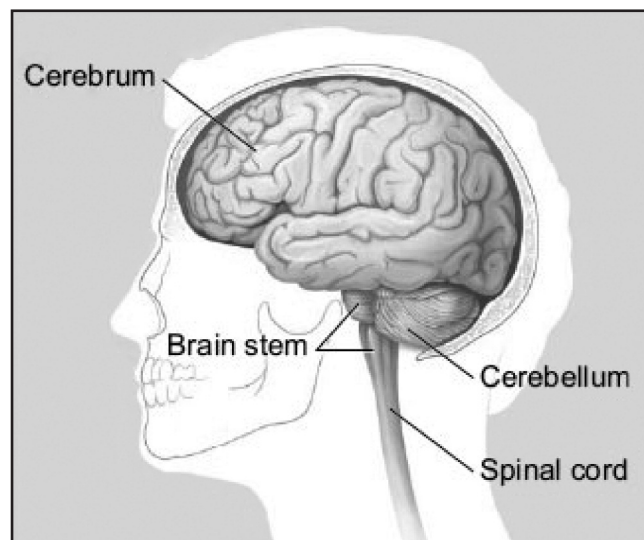
Regulates basic survival behaviors such as feeding, fleeing, fighting, sleep/wake cycles, emotions, and reproduction. Forms three adult brain regions (see illustration above)—hypothalamus (A), the thalamus (B), and hippocampus (C).

[Source: Adapted from National Institutes of Health, at <http://www.cancer.gov/cancertopics/wyntk/brain/page2> and http://www.ninds.nih.gov/disorders/brain_basics/know_your_brain.htm#inner]

HANDOUT 2 ► P.1 Information Processing in the Brain

OVERVIEW:

The brain stem, diencephalon, cerebellum, and cerebrum all work together to process information. These structures receive data, interpret it, and send out commands via the spinal cord. The spinal cord is attached to the brain stem and runs the entire length of the back. Neurons are sent from the spinal cord to all of the different organs in the human body. The spinal cord sends messages to and from the brain. This allows the brain to actively monitor all body functions.



LEFT AND RIGHT SIDES OF THE BRAIN:

The left and right sides of the brain have different functions. In humans, the left side of the body is mostly operated by the right side of the brain and the right side of the body is mostly operated by the left side of the brain. For instance, the left side of the brain will control your right hand.

In addition to controlling different sides of the body, the left and right sides of the brain also process information differently. The left side of the brain is often referred to as the verbal hemisphere, and the right side of the brain is referred to as the nonverbal hemisphere. This is largely due to the role that the left side of the brain has in language and the role that the right side of the brain has in visual processing. Table 1 on the next page outlines the functions of the different sides of the brain.

HANDOUT 2 ► P.2 Information Processing in the Brain

TABLE 1 Functions for the left and right sides of the brain

LEFT BRAIN FUNCTIONS	RIGHT BRAIN FUNCTIONS
Language / Speech	Visual Information
Reading a printed word out loud	Reading a printed word without speaking
Sequential Thinking	Emotional Processing
Logic	Pattern Recognition
Calculations	Recognizing Objects Through Touch
Abstract verbal reasoning (Example: Using the scientific method to solve a problem)	Nonverbal reasoning (Example: Putting the pieces of a puzzle together)

DIFFERENT BRAINS:

Every person has a unique brain. Although all brains have similar structures and functions, each brain is different. For instance, male brains differ from female brains and children's brains differ from adult brains. These differences do not mean that a person is more or less intelligent. It just means that he or she may learn, process, or interpret information differently from others. One disorder in which information is interpreted differently is dyslexia.

Dyslexia is a brain disorder that fails to properly link a visual stimulus (right brain function) with language capacities (left brain function). For example, to write the letter b, you must first visualize it. Someone who is dyslexic may be unable to properly visualize and then write certain letters, like the letter b. Instead of writing b, a dyslexic individual may write d. Dyslexic individuals have a problem recognizing letters, which makes reading and spelling of some words difficult. Individuals who have dyslexia are no less intelligent than others; they just process information differently.

HANDOUT 3 ► P.1 Analyzing Your Brain

PART I:

DIRECTIONS: After viewing the movie *Like Stars on Earth*, identify two things that Ishaan does well and place them in Table A. Identify which side(s) of the brain is predominantly being used and the brain section. Do the same thing for Table B for things that Ishaan cannot do well. An example is in each chart.

Table A: Things Ishaan Can Do Well

FUNCTION	LEFT SIDE OF BRAIN RIGHT SIDE OF BRAIN BOTH LEFT AND RIGHT BRAIN	BRAIN SECTION
Walking	Both Left and Right Sides of the Brain	Cerebellum

Table B: Things Ishaan Does Not Do Well

FUNCTION	LEFT SIDE OF BRAIN RIGHT SIDE OF BRAIN BOTH LEFT AND RIGHT BRAIN	BRAIN SECTION
Arithmetic	Left Side of Brain	Cerebrum

HANDOUT 3 ► P.2 Analyzing Your Brain

PART 2:

DIRECTIONS: Identify three things that you do well and place them in Table A. Identify which side(s) of the brain is pre-dominantly being used as well as the brain section. Do the same thing for Table B for things that you do not do well.

Table A: Things You Can Do Well

FUNCTION	LEFT SIDE OF BRAIN RIGHT SIDE OF BRAIN BOTH LEFT AND RIGHT BRAIN	BRAIN SECTION

Table B: Things You Do Not Do Well

FUNCTION	LEFT SIDE OF BRAIN RIGHT SIDE OF BRAIN BOTH LEFT AND RIGHT BRAIN	BRAIN SECTION

HANDOUT 3 ► P.3 Analyzing Your Brain

DIRECTIONS: After completing the tables above answer the questions below in complete sentences.

1. Do you think Ishaan is better at left brain or right brain activities? Explain your answer.
2. What do you think Ishaan could do to perform better on things he does not do well?
3. Do you perform better at left brain or right brain activities? Explain.

HANDOUT 4 ► P.1 Brain Teaser Exercises

DIRECTIONS: This activity is designed to challenge the way your brain commonly thinks about words and letters. You will complete activities that take an unfamiliar approach to writing and saying words and letters. Decide which student will complete the tasks first; the other student should be the timekeeper and record the time each task takes. When the first student is finished, reverse roles. Be sure you have the following items ready before you start: one sheet of unlined paper and one sheet for graph paper per student; a ruler for each student; a pen; a stopwatch.

PART I: SOME FAMILIAR AND UNFAMILIAR TASKS:

Complete each of the tasks below three times. Record the time in seconds it takes to complete each task in the data table below. Do not practice tasks ahead of time. Complete tasks in the order in which they appear. If any task takes longer than four minutes to complete, mark it with a “U” as unsuccessful, and go on to the next task.

- TASK 1:** Using unlined paper, write your full name in reverse with your left hand.
Example: If your name is Kate you would write “etaK.” Remember to do this three times.
- TASK 2:** Using unlined paper, write your full name in reverse with your right hand.
Example: If your name is Kate you would write “etaK.”
- TASK 3:** Using unlined paper, write your full name forward with your left hand.
Example: If your name is Kate you would write “Kate.”
- TASK 4:** Using unlined paper, write your full name with your right hand.
Example: If your name is Kate you would write “Kate.”
- TASK 5:** Recite the sentences below verbatim. Record the time it takes to say all of the words in perfect order. (Remember, you must perform three different trials.)
- Peter Piper picked a peck of pickled peppers;
A peck of pickled peppers Peter Piper picked;
If Peter Piper picked a peck of pickled peppers,
Where’s the peck of pickled peppers Peter Piper picked?
- TASK 6:** Recite the alphabet in reverse order, starting with Z and ending with A.
- TASK 7:** Recite the alphabet (without singing it) starting at A and ending with Z.

HANDOUT 4 ► P.2 Brain Teaser Exercises

STUDENT PERFORMING TASKS: _____

STUDENT TIMING TASKS: _____

DATA TABLE

Record the time in seconds it took to complete each task. If the task took longer than four minutes to complete, write U for unsuccessful.

TASK	TRIAL 1	TRIAL 2	TRIAL 3
1			
2			
3			
4			
5			
6			
7			

PART II – GRAPHING RESULTS

Use the graph paper to construct a bar graph of your results. Place the independent variable (tasks) along the X-axis and the dependent variable (time in seconds) along the Y-axis.

HANDOUT 4 ► P.3 Brain Teaser Exercises

PART III – ANALYSIS

DIRECTIONS: Answer the following questions in complete sentences.

1. Identify the parts of the brain that were used to complete the tasks above. Also identify which tasks used mostly the left side of the brain and which tasks used mostly the right side of the brain.
2. Which task did you complete in the shortest amount of time? Why do you think you were able to complete this task in a short amount of time?
3. Which task took you the longest to complete, and why?
4. Did your time improve the more times you repeated a task? Why, or why not?

Color and Design: Block-Printed Textiles in India

Enduring Understanding:

- Color and design play an important part in the culture of India.

Essential Questions:

- How are the textiles of India created?
- What is a block print?
- What kinds of patterns are used?
- What are the meanings behind some of the colors?
- What kind of cloth is used and what is the printed cloth used for?
- How has the culture of India influenced the West?

Notes to the teacher:

There are many ways to approach a lesson on textile printing. Creating a block print is the most straightforward way, but the material could be paper instead of cotton. Students could share blocks, making a border design with one and a center pattern with another. They can embellish with sequins, embroidery, painting, or appliqué, all of which are traditional techniques.

If you intend to use either muslin or a pillowcase, it is best to pin the material to a piece of cardboard to avoid wrinkles while working. After the printing process is completed and dry, the project lends itself well to adding all kinds of embellishments. The sky's the limit!

To prepare for this lesson, gather as many examples of Indian textiles as you can. If you cannot find samples of real fabrics, locate photographs and computer images. (See Additional Resources below for printed sources, or simply search for “textile patterns from India” on the Internet. Check a useful website, The Tradition of Textiles in India, at

http://www.indiaheritage.org/creative/creative_textiles.htm.)

DURATION OF LESSON:

Two or three class periods

ASSESSMENT:

Rubric (See Handout 3)

Materials Needed:

Photocopies of the following handouts for each student:

Handout 1: Fabrics of India

Handout 2: Making a Block Print

Handout 3: Color and Design: Block-Printed Textiles in India Rubric

Pencil

Drawing paper

Tracing paper

Carbon paper

Sharpie permanent marker

E-Z-Cut Printing Blocks, at least one per student (Alternatively, “print foam,” wood, or linoleum can be used.) Directions come with the blocks.

Carving tools (for “print foam,” any tool, such as a pencil, that would leave an impression)

Newspaper to cover table top

Scrap paper for proofing the block

Brayer (a small roller for inking)

Inking tray—Plexiglas, cookie sheets, etc.

Fabric paint (or any paint or printing ink)

Solid-color cotton fabric, muslin, pillowcase, etc.

You may also use paper in a size large enough for the print to be repeated in a pattern.

Iron and ironing board (optional; if necessary to set color or iron fabric flat)

LANGUAGE ARTS STANDARDS

LEVEL III (GRADES 5–8)

Standard 1. Understands and applies media, techniques, and processes related to the visual arts

1. Understands what makes different art media, techniques, and processes effective (or ineffective) in communicating various ideas
2. Knows how the qualities and characteristics of art media, techniques, and processes can be used to enhance communication of experiences and ideas

STANDARD 2. Knows how to use structures (e.g., sensory qualities, organizational principles, expressive features) and functions of art

1. Knows some of the effects of various visual structures (e.g., design elements such as line, color, shape; principles such as repetition, rhythm, balance) and functions of art
2. Understands what makes various organizational structures effective (or ineffective) in the communication of ideas

STANDARD 3. Knows how the qualities of structures and functions of art are used to improve communication of one's ideas

1. Knows a range of subject matter, symbols, and potential ideas in the visual arts
3. Knows how visual, spatial, and temporal concepts integrate with content to communicate intended meaning in one's artworks
4. Knows different subjects, themes, and symbols (through context, value, and aesthetics) which convey intended meaning in artworks

LANGUAGE ARTS STANDARDS

STANDARD 4. Understands the visual arts in relation to history and culture

1. Understands similarities and differences among the characteristics of artworks from various eras and cultures (e.g., materials; visual, spatial, and temporal structures)
2. Understands the historical and cultural contexts of a variety of art objects

STANDARD 5. Understands the characteristics and merits of one's own artwork and the artwork of others

1. Distinguishes among multiple purposes for creating works of art
2. Understands possible contemporary and historic meanings in specific artworks
3. Understands how one's own artworks, as well as artworks from various eras and cultures, may elicit a variety of responses

Procedure

1. Hand out and read through the worksheets with students, beginning with **HANDOUT 1: The Fabrics of India**. Show students any sample fabrics or photographs that you have collected. Brainstorm ideas for their patterns and designs from our modern culture or traditional India patterns.
2. Hand out pencils and paper to students. Discuss with students how they should plan out their pattern on the fabric, creating a border design from one stamp and a center pattern with another, taking into consideration color combinations and their meanings.
3. Have students draw their design or place tracing paper over the design they wish to reproduce, and outline the design with a pencil.
4. When designs are complete, have students trace their design onto their printing block. They can use carbon paper or pencil-rub the entire back of the design, turn right side up on top of the printing block and go back over their lines to transfer the design. *Remind them that the raised areas will be the pattern that prints.*
5. Go over the lines on the block with a Sharpie permanent marker.
6. Have students carve out the negative areas (the areas that will be recessed and not printed) on the block, using the carving tools of different shapes. Warn them to carve away from their body and their other hand, in case the carving tool slips.
7. If they are doing a second block for their design, have them repeat this procedure for the second block.
8. Instruct students on using a brayer. After you or they have applied a small amount of ink or paint onto the inking plate, roll both ways to allow the roller to pick up the paint or ink evenly. Roll until the paint comes up in little points. Roll away from yourself slowly, to pick up ink. Roll toward yourself quickly, to remove excess paint. Learn to ink the brayer, not the plate! The object is not to cover the plate with ink or paint, but to have an area of ink or paint large enough to roll the brayer.
9. Using the brayer, apply the paint to the block. Have students make a practice print by placing the block paint-side down onto scrap paper. Rub the back of the block thoroughly to ensure the pattern of paint has completely transferred to the paper.
10. Once students understand the process, have them begin to print the design onto the right side of their fabric, being sure to have each design block touch the previous printing, creating a continuous and repeating design. Direct them to continue to ink the printing block as necessary, applying the design block in the pattern they have decided on in step 2 and using fellow classmates' blocks if desired. Change colors as necessary for the design.

11. Ask students to clean up. Let the painted cloths dry overnight. Distribute **HANDOUTS 2** and **3**. Explain that **HANDOUT 2** is a summary of the steps they have taken to make a block print design. **HANDOUT 3** is the rubric they will use to evaluate themselves on their work.
12. On the following day, have students iron the fabric to set the paint, if necessary. Collect rubrics.

ADDITIONAL RESOURCES

Bingham, Jane. *Indian Art and Culture*. Bloomington, Indiana: Raintree Press, 2004.

Dover Electronic Clip Art Series, *Traditional Designs from India* CD-ROM and book. Mineola, NY: Dover Publications, 2004.

Noble, Marty. *Traditional Designs from India*. Mineola, NY: Dover Publications, 2006.

Pictura Electronic Designs. *Designs from India*. Mineola, NY: Dover Publications, 2007.

Van Roojen, Pepin. *Textile Motifs of India* (incl. CD). Amsterdam: Pepin Press, 2008.



HANDOUT 1 ► P.1

Fabrics of India

India is a country rich with art of all varieties. In buildings and their furnishings, clothing, jewelry, carvings, ceramics, and sculpture, the patterns and color are everywhere! Mahatma Gandhi, the great Indian leader of the 20th century, is credited with the continuance of the traditional arts of the village peoples. He believed that they would be an integral part of the independence of India. Religion plays an important role in the people's lives, and each religion has its own designs, architecture, and traditions. Each village has its own craftspeople and they, in turn, depict the designs and images of their religion and village traditions in their work.

All over the world, textiles have always adorned the human body as well as floors and furniture. In India, textiles are part of the culture and heritage. The economy of entire villages and towns now also depends upon their export to other countries of the world. The use of saris and the presence of Indian-produced tablecloths, window curtains, and bedcovers all speak to the appreciation of these textiles by Western nations. Traditionally, these textiles were made from biodegradable natural materials and fibers such as cotton, silk, and wool, all finished in varied ways.

India abounds in both the design and variety of these fabrics and techniques. They include:

- **PAINTING ON CLOTH**, known as *kalamkari*. These are usually quite large and depict gods and goddesses or mythical creatures surrounded by a border design. These were originally drawn with pen on large cotton material and then painted in by hand. They are now produced with blocks to simplify the process, and are most frequently used as wall decorations and for ceremonies.
- **KASHMIR SHAWLS** are created using goat wool that comes from China and Tibet; they are woven in the Kashmir region, the northwest corner of the Indian subcontinent. It is extremely fine wool and the designs are woven on a loom. This tradition has now been simplified to create *pashmina* shawls, which have become quite popular, boosting the economy of Kashmir.
- **BROCADES** are a woven fabric of silk, highly decorated with raised patterns and gold and silver threading. The artists of these materials are highly skilled, and the brocades are sought as wedding robes for the wealthy. Varanasi is a town noted best for these brocades.
- **APPLIQUÉ** was probably introduced to the country by Westerners. It is a technique that uses cut-out designs of various fabrics that are sewn onto a larger piece of cloth. Common themes are elephants and other animals, simple human shapes, and peacocks.
- **EMBROIDERY** is the art of decorating fabric using a needle and thread, or other fiber, in a pattern or design on the surface of the fabric. Other materials such as small mirror pieces, sequins, pearls, beads, etc. can be added. For a young Indian woman, these cloths might be part of their dowry (gifts for their married life); the embroidery may be prepared years in advance as clothing for the bride and groom, wall hangings for their home, and adornments for their animals.

HANDOUT 1 ► P.2

Fabrics of India

- **TIE-DYING** is a method of coloring materials with bright dyes in varied patterns. This technique has become quite popular in the U.S., as in other countries. Tiny circles of color, created by tying off small amounts of fabric before it is dyed, create the unique style of India. These are not random, but arranged in patterns. Saris and other dresses make use of this fabric, which is also used as adornment for walls, furniture, etc.
- **BATIK** is thought to have originated in Africa and is a way of creating designs on fabric by first applying a “resist” medium to keep the dying process from going into the design area. Different areas of the cloth can then be covered with more resist, creating varying color and design patterns. This method allows for great freedom in design and color ranges. Uses are the same as for the tie-dying.
- **BLOCK PRINTING** now is a quick and inexpensive way to decorate cloth. Traditionally, designs were carefully and painstakingly carved, one-third of an inch deep into Indian rosewood or teak blocks that were usually 5–8 inches in size. Each color used requires a separate carved block design. After being carved, the blocks are put in oil to keep them from warping and to help keep the dyes from warping the blocks as well. The fabric is prepared by pulling and pinning it taut to a base or board. The blocks are then inked and literally stamped onto the fabric with some force to ensure that the design is imprinted. Easier methods are now available with changing technology.
- **DYES.** Originally, all-natural pigments—minerals and plants—were used for the dying processes, but the Western world has introduced synthetic dyes as well in recent centuries. Indigo was used to make a deep blue; turmeric for golden yellow; madder for deep scarlet; rhubarb for yellow; henna for a khaki brown, and red ochre for a brown.

COLOR AS A LANGUAGE

As in many cultures, certain colors have specific meanings in traditional India. Although meanings may vary by particular regions, in general the following symbolic connections are true:

Red is the color of purity and love and is used in wedding costumes.

Yellow is the color of merchants.

Saffron (yellow orange) is that of poets, yogis, and of the earth.

Green is the color of Islam.

Indigo is the color associated with the gods, where light blue is the sky.

White is peace, calm, and brightness. It is often worn for funerals because it lacks color.

Widows have traditionally dressed in white.

Black is anger, darkness, negativity, lack of energy—not to be worn to a wedding!

Gold and *red* together symbolize wealth.

HANDOUT 1 ► P.3

Fabrics of India

USING THIS NEW KNOWLEDGE FOR THE PROCESS OF CREATING A BLOCK-PRINTED FABRIC

What kind of design could you create that would be interesting when repeated over and over on fabric or paper? What are the traditional designs of the area in which you live? If you choose to use a traditional Indian pattern, where could you find some ideas? Books or Internet searches could be a start. Look around the room you are in; look at the clothing people are wearing; what patterns could be created from these? What about patterns in nature?

Once you have made a decision, you are ready for the paper and pencil to begin your drawing. Don't forget to plan to use lots of color.

HANDOUT 2 ► P.1 Making a Block Print

1. After going over the textile information with your teacher, Fabrics of India, brainstorm ideas for your patterns and designs from our modern culture or traditional Indian patterns. Remember that the raised areas on your blocks will be the pattern that prints.
2. Plan how you will lay out your pattern on the fabric, creating a border design from one block and a center pattern with another, taking into consideration color combinations and their meanings. You may wish to share blocks with a classmate.
3. Draw your design or place tracing paper over the design you wish to reproduce, and outline the design with a pencil.
4. Trace your design onto your printing block using carbon paper (or pencil-rub the entire back of the design; turn right-side up on top of the printing block and go back over the lines to transfer the design).
5. Go over the lines on the block with a Sharpie permanent marker.
6. Using the carving tools of different shapes, carve out the negative areas (the areas that will be recessed and not print) on the block. Be cautious to carve away from your body and your other hand.
7. If you are doing a second block for your design, repeat this procedure for the second block.
8. Prepare your fabric or paper for printing, having all tools ready to print.
9. To use the brayer: Roll both ways to allow the roller to evenly pick up the paint or ink. Roll until the paint comes up in little points. Roll away from yourself slowly to pick up ink. Roll toward yourself quickly to remove excess paint. Learn to ink the brayer, not the plate! The object is not to cover the plate with ink or paint, but to have an area large enough with ink to roll and cover the brayer.)
10. Using the brayer, apply the ink or paint to the block. Make a practice print by placing the block with the inked side down onto the scrap paper. Rub the back of the block thoroughly to ensure the colored pattern has completely transferred to the paper.
11. Once you have gotten the hang of the process, begin to print the design onto the right side of your fabric. After the first print, be sure to have the next design block touch the previous printing, forming a continuous and repeating design. Continue to ink the printing block as necessary, applying the design block in the pattern you have decided in Step 3 and using fellow classmates' blocks if decided.
12. Change colors as necessary for the design.
13. Wash the brayer and plate and put all inks and tools away.
14. Let the paint dry overnight.
15. Iron the ink or paint so it will set into the cloth, if necessary.
16. Fill out your rubric.

HANDOUT 2 ► P.2 Making a Block Print



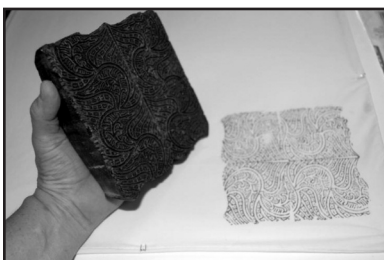
STEP 8: Have your material, printing block, brayer, ink and plate ready to print.



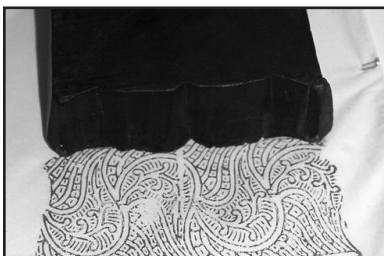
STEP 10: Ink the plate just enough to get the right consistency and cover the brayer.



The block's raised areas are completely inked.



STEP 11A: The design has been printed once.
Note the area that did not print as well.
Be sure to rub thoroughly!



STEP 11B: The pattern is forming

HANDOUT 3

Color and Design:

Block Printed Textiles in India Rubric

STUDENT NAME: _____

DATE: _____

CLASS: _____

Each requirement is worth 3 points. Give yourself the grade point(s) 0–3 you feel you deserve for each under S, for student. The teacher will assign final grade points under T. There are 30 possible points in all.

S	T	STUDENT:
_____	_____	Read and viewed the informational handout and participated in class discussion.
_____	_____	Completed a sketch of ideas for transfer to final project material.
_____	_____	Transferred the design to the printing block and outlined with Sharpie marker.
_____	_____	Carved out the negative spaces, creating interesting patterns.
_____	_____	Used the carving tools carefully, always carving away from himself or herself.
_____	_____	Became proficient in using the brayer and ink or fabric paint.
_____	_____	Was focused, worked diligently, and was cooperative throughout project, cleaning up work area thoroughly and promptly.
_____	_____	Created a finished colorful and decorative fabric.
_____	_____	Signed and dated the textile design with fine Sharpie marker when completed.

TOTAL POINTS:

_____	_____	27–30 points=A
		24–26 points=B
		21–23 points=C
		18–22 points=D
		17 points or below=F



Diwali — The Festival of Lights

Enduring Understandings:

- Festivals and traditions are key elements of a culture, helping to establish and define a sense of community.
- Festivals and traditions involving light are common themes for many cultures and societies worldwide.
- Many cultures have traditions that celebrate the concepts of victory of light over darkness, good over evil, good luck over misfortune, success over failure, or eternal life over death.

Essential Question:

- What festival and traditions in Indian culture celebrate the universal theme of light over darkness or good over evil?

Notes to the teacher:

This lesson explains the Indian holiday of Diwali, putting it in the context of other world celebrations of light, and gives students the opportunity to make a *diya*, a simple clay lamp similar to ones used during Diwali. In the first activity, students discuss the meaning and nature of the celebration; **HANDOUT 1** provides all necessary information. You may want to use this material in a lecture or presentation lesson or give the information as a handout to be read, depending on the type of class and time you have available.

Some of the proper nouns may be unfamiliar and look more difficult for English speakers to pronounce than they really are. Diwali is pronounced dee-VAH-lee or dee-WAH-lee. Ayodhya, the kingdom of Rama, is pronounced ay-YO-dyah. Rama's father is Dashratha, pronounced dash-RAH-tha. Ravana, the demon who fights with Rama, has the accent on the first syllable, RAH-va-na.

The much abbreviated story of Rama and Sita in **HANDOUT 1** comes from the Indian epic the Ramayana. There are many excellent children's versions of this story, if you would like to expand on this in class. Students respond well to this adventurous tale, especially Rama's rescue of Sita with the help of a bridge made of monkeys.

The second activity is a simple art lesson. There are different methods for making the lamps and many materials that can be used: air-dry clay, Sculpey, or traditional low- or high-fire clays. You can keep it really simple or make it ornate. Using small tea lights works well and is relatively safe. The lamp should, traditionally, not be

larger than can be held in the hand. Be sure to check with your administrator before allowing students to light candles in school.

As students complete their lamps, you may wish to allow them to play cards to celebrate the good luck of Diwali. Again, check with an administrator about school policy.

The Internet is a great source for images to use in this lesson.

DURATION OF LESSON:

Two or three class periods plus drying and firing time.

ASSESSMENT:

Student discussion of Diwali traditions
Rubric for Diwali lamp

Materials needed:

Photocopies of handouts for all students:

Handout 1: Diwali Traditions, if you choose to give it to students

Handout 2: Diya Rubric

Packs of playing cards

Pencil

Drawing paper

Clay of choice

Simple clay tools: fettling knife, foam tray to work on for each student, water

If texturing the vessel, texture tools such as shells, forks, etc.

Glazes, if firing; or acrylics, if air-drying and painting

Tea lights for each student

Optional: small mirror pieces, acrylic jewels, other small embellishments

WORLD HISTORY STANDARD

LEVEL III (GRADES 7–8)

STANDARD 9. Understands how major religious and large-scale empires arose in the Mediterranean Basin, China, and India from 500 BCE to 300 CE

4. Understands the major religious beliefs and social framework in India during the Gangetic states and the Mauryan Empire (e.g., the major beliefs and practices of Brahmanism in India...)

GEOGRAPHY STANDARD

LEVEL III (GRADES 6–8)

STANDARD 10. Understands the nature and complexity of Earth's cultural mosaics

2. Knows ways in which communities reflect the cultural background of their inhabitants



VISUAL ARTS STANDARDS

STANDARD 1. Understands and applies media, techniques, and processes related to the visual arts

LEVEL III (GRADES 5–8)

1. Understands what makes different art media, techniques, and processes effective (or ineffective) in communicating various ideas
2. Knows how the qualities and characteristics of art media, techniques, and processes can be used to enhance communication of experiences and ideas

STANDARD 2. Knows how to use structures (e.g., sensory qualities, organizational principles, expressive features) and functions of art

LEVEL III (GRADES 5–8)

1. Knows some of the effects of various visual structures (e.g., design elements such as line, color, shape; principles such as repetition, rhythm, balance) and functions of art
2. Understands what makes various organizational structures effective (or ineffective) in the communication of ideas

STANDARD 3. Knows how the qualities of structures and functions of art are used to improve communication of one's ideas

LEVEL III (GRADES 5–8)

1. Knows a range of subject matter, symbols, and potential ideas in the visual arts
2. Knows how visual, spatial, and temporal concepts integrate with content to communicate intended meaning in one's artworks

VISUAL ARTS STANDARDS

3. Knows different subjects, themes, and symbols (through context, value, and aesthetics) which convey intended meaning in artworks

STANDARD 4. Understands the visual arts in relation to history and cultures

LEVEL III (GRADES 5–8)

1. Understands similarities and differences among the characteristics of artworks from various eras and cultures (e.g., materials; visual, spatial, and temporal structures)
2. Understands the historical and cultural contexts of a variety of art objects

STANDARD 5. Understands the characteristics and merits of one's own artwork and the artwork of others

LEVEL III (GRADES 5–8)

1. Distinguishes among multiple purposes for creating works of art
2. Understands possible contemporary and historic meanings in specific artworks
3. Understands how one's own artworks, as well as artworks from various eras and cultures, may elicit a variety of responses

Procedure:

ACTIVITY 1: Learning About Diwali

1. Tell students that today they will be learning about one of the main festivals in India, the festival of lights as seen in the film *Like Stars on Earth*. Do not mention the name “Diwali” yet. If possible, show them the beginning of Scene 9, “Boarding School.” In this scene there are several mentions of Diwali, and then Ishaan is shown with family and friends on the rooftop, lighting fireworks as part of the celebration.
2. Generate a discussion about light, using the following questions:
 - a. What is the power of light? Why do we need light? What does it do for us?
 - b. How is light important to the Earth and the universe?
 - c. Did you sleep with a nightlight or with a door cracked open when you were young? Were you afraid, scared, or nervous in the dark? Did the light make you feel better, safer? If so, why?
 - d. Did dark places make you feel nervous when you were little? Do you still feel that way?
 - e. Did being alone make a difference when you were in the dark? Would it have felt better if someone had been with you or you had some way to shine a light when you needed it?
3. Explain to students that people have always felt this way about light and darkness, and that it is a common and universal sentiment worldwide.
4. Ask students how in their own lives, families, and religions they celebrate light. (Sample answers: burning birthday candles, lighting menorah candles at Chanukah, lighting the Christmas tree, setting off fireworks, decorating with lights.)
5. Ask students why lights are important to such rituals. What festivals, holidays, celebrations, traditions, or holy days do they celebrate that use the power of light or talk about the idea of good over evil or life over death? Explain that these, too, are worldwide ideas that humans have been using and trying to explain for thousands of years.
6. Tell the class that today they will be learning about the main Hindu festival in India that celebrates the power of light over darkness, the victory of good over evil. It is called Diwali, the festival of lights.
7. Distribute **HANDOUT 9** and read it with the students. Or better yet, turn off the lights, light a candle, and tell the story of Diwali, or simply read **HANDOUT 9** to the students in your best bedtime campfire voice.



ACTIVITY 2: Making a Diwali lamp

1. After going over the handout, have the students draw a design of what they would like their lamp to look like, including any design they may want to put on it. Go over the meaning of colors to the people of India. (See Lesson 6 for information on this subject.)
2. Give a palm-size piece of clay to each student. Tell them to make this into a ball and then push their thumb down into the clay, almost to their palm, to begin a pinch pot. Then tell them to begin to shape it according to their design. Smooth the sides and edges, being sure that the walls are evenly thick. If texture is to be added, do that now.
3. Tell students to make the small spout area and add a handle, if desired. When finished, direct students to put their initials on the bottom of the lamp.
4. Air-dry the lamps (or fire in a kiln, if needed).
5. After drying or firing, choose one of these options:

Option 1: Paint the entire *diya* white. When dry, use fine line permanent markers to put Indian-style patterning and colors on it.

Option 2: Use under-glazes to decorate the *diya* with Indian patterning and colors. Coat with clear gloss glaze and fire on stilts.
6. For both options, after all the steps have been completed, adding small mirror pieces around the top will help to reflect light. Any other kind of embellishment can be added at this time.
7. Add a tea light candle and display.

CONCLUSION

1. Review with students the various meanings of Diwali's symbolism. (Victory of goodness over evil, light over dark, knowledge over ignorance.)
2. Ask students why this is a particularly fitting holiday for the filmmaker to use. (In the film, Ishaan becomes successful both academically and personally; a "lamp of knowledge and goodness" is truly lit for him. His parents are "enlightened" about his learning differences.)

HANDOUT 1 ► P.1

Diwali Traditions



Diwali, Diwali, Dewali, Deepavali—all of these names pertain to the same, important celebration in the Hindu religion. Diwali, which translates as “rows of lamps,” takes place each year on the 15th day of the Hindu calendar month of Kartika (October or November in North America). The festival lasts for five days and is often referred to as “The Festival of Lights.” This is because of the *diyas*, which are small earthenware lamps that can be held in the hand, but are also lit and placed all around the inside and outside of the home. These oil lamps burn throughout the day and night to ward off darkness and evil. Towns can be seen from many miles away because of the number of lights that are lit.

On the first day of the festival, the Goddess of Wealth, Lakshmi, is led into the home by the lights and the windows that have been left open. Wealth is considered a reward for having done good deeds in a previous life and not a sign of corruption. The second day focuses on Kali, the Goddess of Strength, and ridding oneself of laziness and evil. On the last day of the year in the lunar calendar, which is the third day of the festival, lamps are again lit to symbolize knowledge and reflection on the festival. The following day is the first day of the lunar New Year. Business accounts are settled on this day and new ledgers are started. All people are encouraged to take anger, jealousy, and hate from their hearts. Balipratipada is the final day of the festival. An old Indian king, Bali, is remembered for destroying old philosophies and for being generous. On this day, all are encouraged to be good to others, even their enemies. All these days pass with a clean home, good food, good friends and family, lights, and fireworks. It is said that Diwali is to the Hindus what Christmas is to Christians. The festival of Diwali also involves the sharing of gifts with loved ones and friends.

History of Diwali

The history of Diwali is full of legends from ancient Hindu religious writings and stories. The common theme of all the legends is the universal victory of good over evil. Diwali, the festival of lights, represents the lighting of the lamp of knowledge and goodness within us. It asks believers to practice those ideas for the five days of the festival and to use those thoughts in their day-to-day lives.

The Story of Rama and Sita

Lord Rama was a great warrior king who was exiled by his father, Dashratha, the King of Ayodhya; Rama’s loving wife, Sita, chose to go into exile with her husband. While away from the kingdom, Sita was kidnapped by the demon Ravana. Lord Rama rescued his wife and destroyed the demon. Ravana had been highly educated and he was a clever demon, who should have known better than to do bad things, but evil still controlled his mind.

Lord Rama returned to his kingdom of Ayodhya with his wife, Sita, after 14 years of exile. After this victory of good over evil, the people welcomed him home by lighting rows of clay lamps. So the festival of lights, Diwali, is an occasion to honor Rama’s victory over Ravana; it celebrates the victory of goodness and truth over evil, and the return of the light of knowledge and truth to mankind.



HANDOUT 1 ► P.2

Diwali Traditions

The Tradition of Lights

Diyas, the small lamps used during Diwali, are usually made from clay and are filled with *ghee* (clarified butter) or oil, with a cotton or wool wick for burning. Most *diyas* now use tea candles or any other small candle, as these are easier than oil with a wick. The traditional shape of the lamp is slightly oval, with a small spout area where the wick lies, and sometimes with a small handle on the opposite side. They can be extremely simple or ornate; plain or colorful.

The Diwali lights represent bringing the supernatural brightness of joy and combining it with the hope of finding light in darkness. They are symbols of the coming of knowledge where there has been ignorance, and the spreading of love where there has been hate.

As technology has changed over the years, many traditional oil lamps have been replaced. Especially in the cities, earthen lamps were replaced by candles of various colors and shapes. Then candles gave way to electric lights of different shapes and sizes that now illuminate the dark, cold nights of Diwali. Today some people use decorated electric light candles or other decorative lights, putting them in their windows for the festival.

The Tradition of Playing Cards

A modern tradition of playing cards is extremely popular during Diwali. It is said that when people play cards during Diwali, the goddess of wealth will smile upon the players, ensuring her goodwill in the coming year. The memories of success at cards during Diwali night can be joyful for the winners, and the losers look forward to the next Diwali to try to change their luck.

The tradition of gambling on Diwali also has a legend behind it. It is believed that on this day, the Hindu goddess Parvati played dice with her husband Lord Shiva and decreed that whoever gambled on Diwali night would prosper throughout the following year.

This tradition of playing cards with some gambling stakes on this particular day continues even today. A popular saying states that one who does not gamble on this day will be reborn as a donkey in his next birth. Casinos and local gambling houses do a brisk business during the Diwali festival. In most homes, people invite their friends and relatives over to play cards. Card-playing also serves as a reminder of the fickleness of luck and adds a little light humor and fun, giving a sense of balance to the pursuit of material success throughout the year.



HANDOUT 2

Diya Clay Lamp Rubric

STUDENT NAME: _____

DATE: _____

Each requirement is worth 3 points. Give yourself the grade point(s) 0–3 you feel you deserve for each under S (for “student”). The teacher will assign final grade points under T. There are 30 possible points in all.

S	T	STUDENT:
_____	_____	Read the informational handout and participated in class discussion.
_____	_____	Completed a sketch for the shape and pattern/design on the lamp.
_____	_____	Followed directions in making a pinch pot.
_____	_____	Smoothed the clay and made sure that the base was level, the top even.
_____	_____	Created a pleasing shape and added the spout.
_____	_____	Added some decorative pattern and design.
_____	_____	Glazed/painted the fired/dried piece.
_____	_____	Added pattern and design to the final layer.
_____	_____	Added embellishments to the <i>diya</i> after all other steps were completed.
_____	_____	Signed and dated the bottom with fine Sharpie marker when completed.

TOTAL POINTS:

_____	_____	27–30 points=A
		24–26 points=B
		21–23 points=C
		18–22 points=D
		17 points or below=F

The Historical and Social Background of Bollywood

Enduring Understandings:

- Indian drama, both theater and film, has a long history and uses music, dance, recitation, and hand gestures to tell stories.
- Hollywood and Bollywood films have many similarities, but they also differ in many ways.

Essential Questions:

- What are the characteristics of Indian theater?
- How is Bollywood like Hollywood? How is it different?

Notes to the teacher:

This lesson, the first of two music-related lessons based on *Like Stars on Earth*, is an introduction to the historical background of Indian theater from its inception.

In Activity 1, after students work with **HANDOUT 1: The Beginnings of Bollywood**, move them to a viewing area with a computer projector or have students sit at individual computers to view separately. If they are viewing individually, students should take notes on the main aspects of Indian theater they observe in each video.

Activity 1 teaches students about traditional Indian drama: Classical beginnings, puppet theater, and Bengali theater. Before class, locate examples of these theater forms on YouTube by entering the following search terms: “Classical Indian dance theatre,” “Indian puppet theatre,” and “Bengali Theatre.” [Note the British spelling, “theatre,” rather than the American “theater.” Also, you will need to sort out Asian Indian videos from Native American dance theater videos that may come up in the search.] Find at least one example of each type of theater. Some examples:

<http://www.youtube.com/watch?v=XJ8hi3rZ3sI> (“Kanupriya” Indian classical dance Odissi, theatre by Shubhada)

<http://www.youtube.com/watch?v=MU4McnuYy1g&NR=1> (Puppet Show at Shilpgram (Udaipur)/Rajasthan.mp4)

http://www.youtube.com/watch?v=_bqFcN6wbZE (A clip from Bengali drama *Madhabi* presented by ace theater group Nandikar)

<http://www.youtube.com/watch?v=WhGfbNjnyG8> (A chorus song from Nandikar’s Bengali drama *Madhabi*)

<http://www.youtube.com/watch?v=ogCY3E-YIbY&feature=related>

(Belgium Bangla Theatre (Puthi) in Boishakhi Mela 08
*ABCB -3)

Bookmark the clips you wish to use. Be sure to preview the clips and plan how much viewing time is appropriate for the students in your class and the time available.

Activity 2 is a literacy exercise in which students read a complex timeline to understand the development of the film industry in both Hollywood and India. They complete a fill-in-the-blank worksheet to check their ability to locate information. In teams, they generate questions about the timeline and rank the questions in order of difficulty. Then they play a *Jeopardy!*-style game using the questions they generated. This activity may be broken into two class periods—the first to complete the worksheet, the second for the game.

DURATION OF LESSON

2-3 class periods

ASSESSMENT

Class discussion

Game questions

Worksheet from Handout 2

Materials needed:

Copies of Handout 1: The Beginnings of Bollywood

Access to a computer for each student or a computer equipped with a projector (preferred)

Copies of Handout 2: Hollywood/Bollywood Timeline and Timeline Worksheet

Large index cards (5x7)

Magnets or tape (to affix cards to chalkboard or white board)

Small percussion instruments or noisemakers—one “sound” per team.

MUSIC STANDARDS¹

LEVEL III (GRADES 6-8)

STANDARD 7. Understands the relationship between music and history and culture

1. Understands distinguishing characteristics (e.g., relating to instrumentation, texture, rhythmic qualities, melodic lines, form) of representative music genres and styles from a variety of cultures.
2. Understands characteristics that cause various musical works (e.g., from different genres, styles, historical periods, composers) to be considered exemplary.
3. Understands the functions music serves, roles of musicians (e.g., lead guitarist in a rock band, composer of jingles for commercials, singer in Peking opera), and conditions under which music is typically performed in various cultures of the world.

THEATRE ARTS STANDARDS¹

LEVEL III (GRADES 5-8)

STANDARD 6. Understands the context in which theater, film, television, and electronic media are performed today as well as in the past

3. Understands the emotional and social impact of dramatic performances in one's own life, in the community, and in other cultures
4. Knows ways in which theater reflects a culture
5. Knows how culture affects the content and production values of dramatic performances

Procedure:

ACTIVITY 1: A brief history of Indian theater

1. Distribute **HANDOUT 1: The Beginnings of Bollywood** and have students read it either silently or aloud.
2. Ask students to answer the following questions to check their understanding:
 - a. How far back can one trace the origins of Indian theater? (Approximately 5000 years, or 3000 BCE. Tell students that the high point of ancient Greek theater was the 5th century BCE, and stress how much older the Indian theater tradition is.)
 - b. What are three different types of Indian theater? What are their characteristics? (1. Classical Indian theater, which combines recitation from the epics, music, dance, and hand gestures. 2. Puppet theater, which includes stories of great heroes and mythological figures, comedy, satire, music and dance. 3. Realistic Bengali theater, based on important social and political themes, but also including music and dance.)
 - c. What is Bollywood? (A filmmaking center in Mumbai.) Where did it get its name? (A combination of Bombay [Mumbai, today] and Hollywood)
 - d. Given this history, do you expect Bollywood movies to include music and dance?
 - e. To conclude, how important have music and dance been to Indian theater? (Essential in all three forms.)
3. Explain to students that they are going to watch some filmed examples of live theatrical examples of these

¹ Source: McRel (Mid-continent Research for Education and Learning). See <http://www.mcrel.org/compendium/browse.asp>

forms. Caution them that the quality of the film is not always professional and that they are not likely to understand the language. Their goal is to learn as much as they can about Indian music, dance, and theater. Show the film clips you have chosen. After each clip, stop to discuss the following questions:

- a. Which type of theater was shown?
 - b. Which of the main aspects of Indian theater did you notice?
 - c. Did you notice other aspects of the style that you had learned about in the reading in Handout 1? What aspects of this selection help to make it authentic Indian theater?
 - d. What musical instrument(s) did you see and hear? How was music used in this performance?
4. Explain to students that when filmmaking began in India in the 20th century, many of these elements of live theater were incorporated in films.



ACTIVITY 2: Bollywood and Hollywood in the 20th century

1. Distribute **HANDOUT 2:** Hollywood/Bollywood Timeline. Make sure students understand how to work with the complex format of this timeline. Ask students to read through the information on the handout and note similarities and differences in the major items of each time period.
2. Have students complete the timeline worksheet in groups or individually. This worksheet will serve as preparation for the main activity.

Suggested Responses:

1. Thomas Alva Edison; New York
 2. British
 3. Bombay; Cinematography; Lumiere; silent
 4. a nickel
 5. music; movement
 6. talkies
 7. religion
 8. social issues
 9. younger
 10. *Masala*
3. Split the class into four or eight teams. If there are four teams, assign each team to be responsible for two time periods; if there are eight teams, assign each team to be responsible for one time period. Give each team five index cards.
 4. Tell each team to write questions and answers based on their assigned time period. Each team should create five questions of varied levels of difficulty, with corre-

Lesson 8 MUSIC HISTORY

sponding answers. Direct them to write each question on one side of the index card and the answer on the other side.

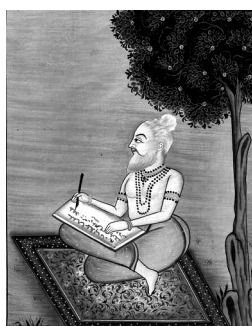
5. Have each team sort its questions from easiest to most challenging. Ask them to assign points to each question, with one question per point value, from 1 to 5. The question with one point is the easiest; the hardest is ranked 5.
6. While students are writing questions, draw a grid like the one below on the chalkboard or white board so that the teams will be ready to play BOLLYWOOD BOWL.

1896 -1900	1901-1920	1930'S AND 1940'S	1950'S	1960'S	1970'S	1980'S	1990'S AND BEYOND
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5

7. Have a member from each team affix each of the team's cards under a card with the appropriate point value for its category—one for each point value. This is set up much like the popular game board for *Jeopardy!*
8. Act as the host or moderator or choose a student do so. Tell students that the teams will take turns calling for a category and a point value. Give students percussion instruments or other noisemakers with which they can “buzz in.”
9. The host reads the ANSWER and teams buzz in with their percussion instrument or noisemaker to give the QUESTION. The team in the end with the most points is the winning team.
10. When the game is finished, ask students to summarize in two sentences: How are Hollywood and Bollywood alike? How are they different?

HANDOUT 1 ► P.1 The Beginnings of Bollywood

India is well known for the richness of its culture, and for over 5000 years, Indian theater has been part of India's rich history. As early as 600 BCE, stories known as *Jatka* included references to theater. Great narrative epics (long narrative poems) such as the *Ramayana* and the *Mahabharata*, contain references to theater, which in these narratives is known as *nata* or *natak*.



Ramayana

Between the fourth and second century BCE, **Classical Indian Theater** took shape and a famous book, *Natya Shastra*, was written to describe it. The best known names for this form were *Natya* or *Nautanki*. While an epic was recited, it was accompanied by music. Over time, movement was added to the recitation and music. Dancers and actors used hand gestures to convey meaning and feeling; these gestures were standardized so that audiences could understand the movements. The purpose of the performances was partially for recreation, but more for the education of society, to teach duty and goodness. Combining music, dance, and recitation helped to create a more willing audience for teaching.

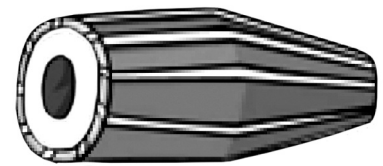
Natya and many other theater forms were used to spread Buddhist doctrine; this form of theater helped this religion to spread throughout the world. During India's Golden or Classical Age, King *Vikramaditya* had nine famous men of letters, called the "Nine Gems," in his court, including a well-known playwright, *Kalidasa*. These men and other scholars developed Sanskrit literature to transcribe the major works of this era.

Religion was important in early Indian theater. There were even rituals written into the dramas that were part of the preparation for a performance. If love was a theme of an epic, it was not meant to show the love between mortals, but the devotion of a soul to a God.

Puppetry or **Puppet Theater** is another important form in the development of Indian theater. This form of entertainment is one of the most ancient Indian customs. Puppet theater was developed to convey the stories of great rulers and of mythological characters. Later in its development, the elements of satire and comedy were included. The main themes of this style of theater follow the two major epics, the *Ramayana* and the *Mahabharata*. Puppetry techniques that have continued even until today include rod, string, shadow, and glove puppetry. Puppets are generally small, and often the proportions of a body are somewhat skewed to create a more magical effect. In most areas, one family is in charge of the puppet theater for their village. Roles in the theater performance and background are in large part predetermined by gender. Controlling the strings and puppets is done by the men, whereas the dance and music are performed by the women. The *mridangam* (a double-sided drum) and finger cymbals are usually used by children.

HANDOUT 1 ► P.2 The Beginnings of Bollywood

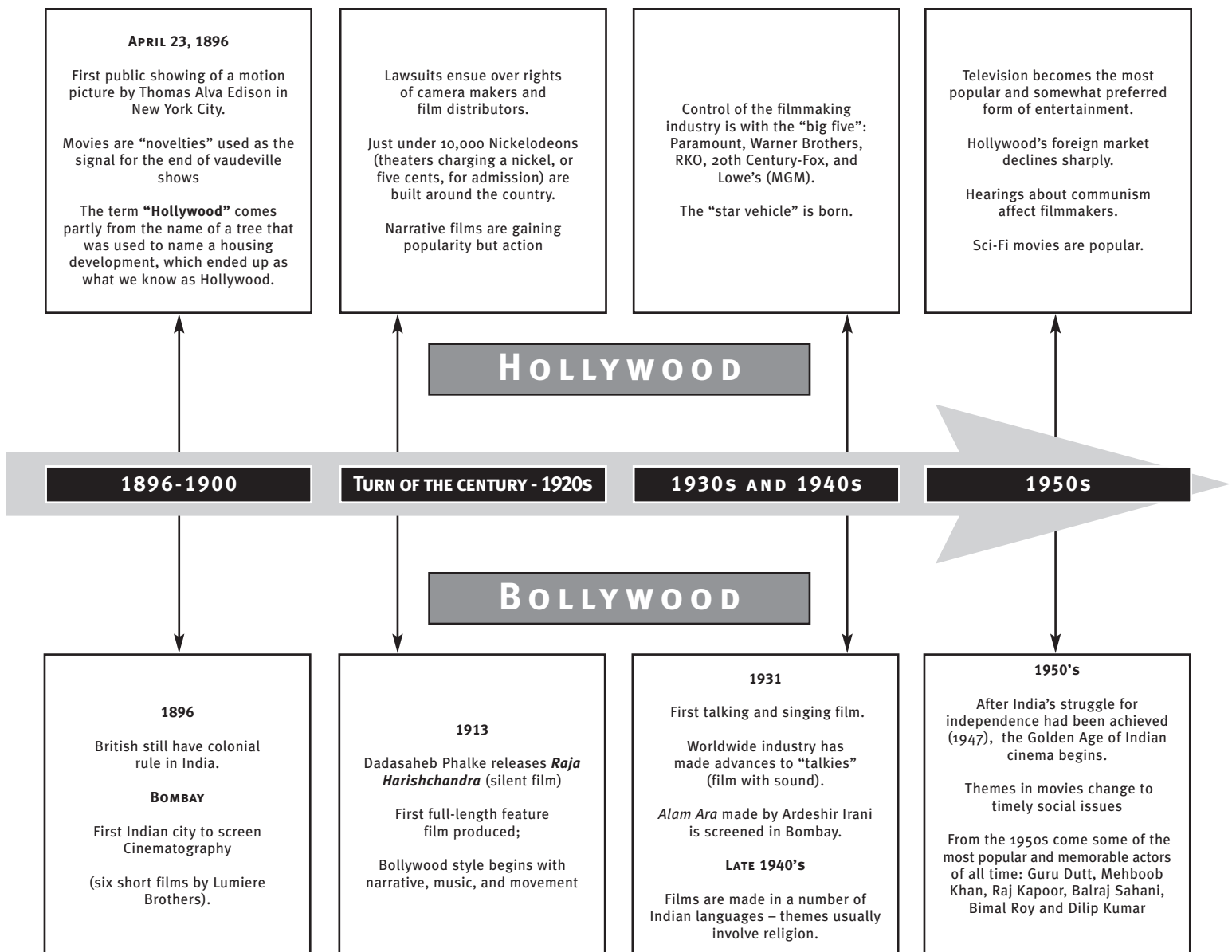
Bengali Theater, over its long history, has undergone the most change of the three traditions discussed here. The earliest forms of this style began in the year 1794, in a protest against British imperialism. The aim of those involved was to educate the public about the socio-political atmosphere. Over time, the subject matter of this art form changed to subjects involving English life; even Shakespearean plays were adapted. While the subject matter changed, the Indian music and classical dance remained as an integral part of the theater form. As theater in Bengal continued, it changed faces again to include and highlight “People’s Theatre” – theater for the people and by the people. This was most certainly a sign of the times in India. As British control began to weaken, more realistic theater became popular. The great playwright and actor Shombhu Mitra and actor, director, and writer Utpal Dutt were pioneers in this genre, making realistic theater more popular and accessible.



We can see that Bengali Theater and other historical forms led to the Bollywood style of filmmaking today. The term “Bollywood” comes from the early 1970s, when films that were produced in Bombay (the old name of the city now called Mumbai) combined with the Hollywood style. The form of today’s Bollywood combines the elements of the forms outlined above: the satire and comedy introduced in puppet theater; social drama from Bengali theater; and the music and dance that began in the Classical period and is included in all these genres. Bollywood is a growing and thriving form of entertainment that has kept the traditions of the past an integral part of the process of filmmaking, while still using modern themes and techniques.

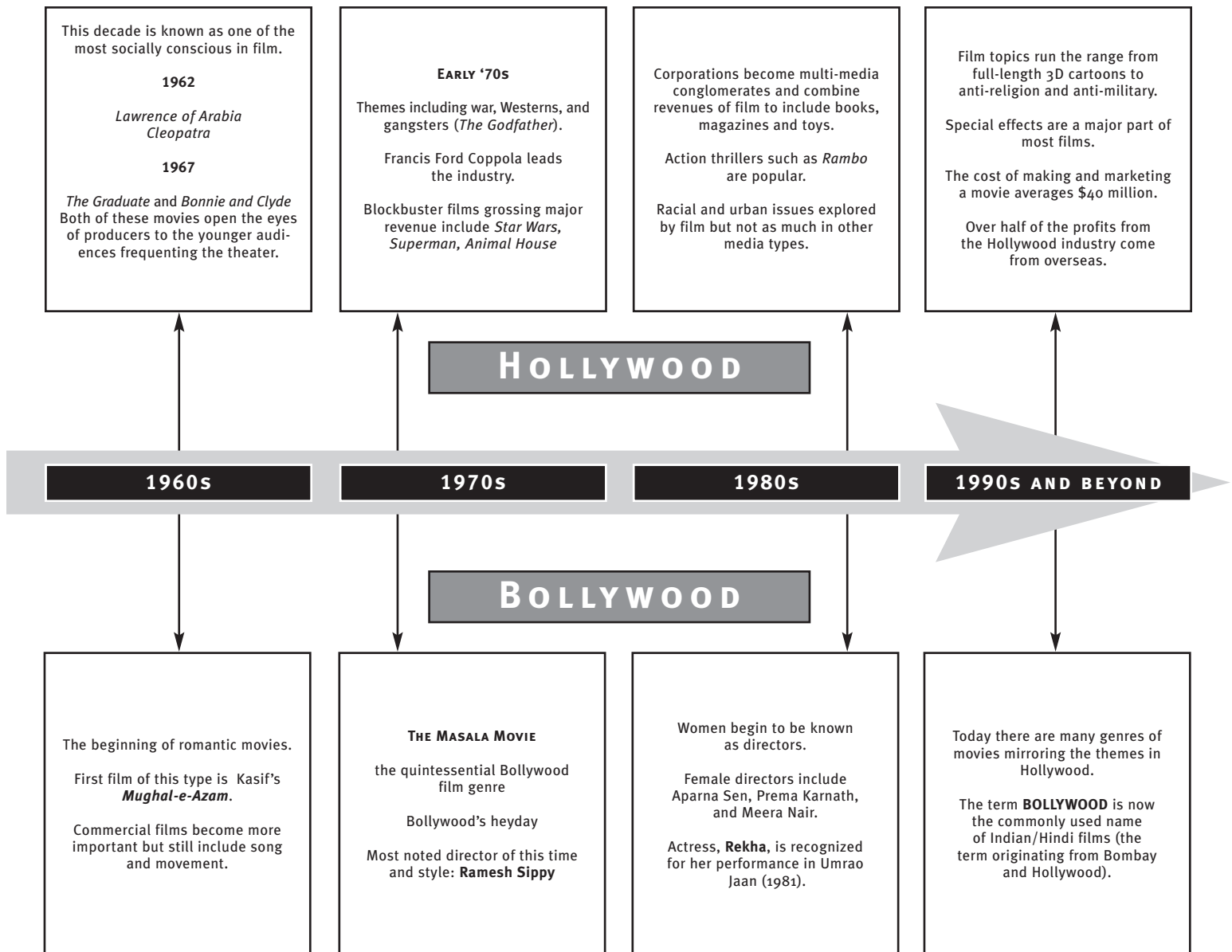


HANDOUT 1 ► P.1 Hollywood/Bollywood Timeline





HANDOUT 1 ► P.2 Hollywood/Bollywood Timeline



HANDOUT 1 ► P.3 Hollywood/Bollywood Timeline

STUDENT NAME: _____

DIRECTIONS: Fill in the blanks in the sentences below, using information from the “Hollywood/Bollywood Timeline.”

The roots of Bollywood date back more than 5000 years. Indian theater has been an important part of Indian culture for many years. The numerous styles of Indian theater led to the Bollywood style of film in the 20th century.

1. Late in the 1800s, a man named _____ made the first film to be shown in public. This film was shown in _____ City. The movies were born!
2. In the year 1896, India was under _____ rule.
3. The first city where a film was shown in India was _____. The first viewing was called _____, six short films by the _____ Brothers. In 1913, a new _____ film, *Raja Harishchandra*, was released.
4. At the same time in the U.S., American films were the newest trend in entertainment. Cities and towns across the nation were adding Nickelodeons to their landscape. These theaters got their name because of the price of admission: _____.
5. Whereas the American films were filled with action scenes, Indian films based their format on the many traditions of Indian theater from the past. The three main ingredients in these films were: narrative, _____ and _____.

HANDOUT 1 ► P.4 Hollywood/Bollywood Timeline

6. In 1931, the first film to include talking and singing was released. The term for these movies with sound that were now popular around the world was _____.
7. By the late 1940s, films were being made in many Indian languages with themes that usually focused on _____.
8. In the 1950s, with India's independence, came a change in the popular subject matter of films. Now filmmakers chose the timely _____ of the day as their topics for film.
9. In the U.S., the 1960s has been called one of the most socially conscious eras in history. Filmmakers started paying more attention to the _____ audiences and wooed them with movies like *The Graduate* and *Bonnie and Clyde*. These movies spoke to the younger generation and helped Hollywood to gain momentum while television was fast becoming the choice for entertainment.
10. Ramesh Sippy was a well-known director of this time who explored the style of the _____ movie. This genre was given its name because of the mix of action, comedy, drama, and music in each film. The actual term, *Masala*, comes from the same South Asian word that means a blend of spices. Bollywood kept to its roots and continued its success with dramas that included music, while American audiences of the 1970s were watching movies like *Superman* and _____.
11. Over the years, Hollywood and Bollywood have had many similarities. In addition to the many similar themes of films, both Bollywood and Hollywood are now, more than ever, concerned with the end product and the profit margin. With special effects and computer generation, Bollywood and Hollywood are sure to be around for a long time.

A World of Music

Enduring Understandings:

- Music around the world reflects the values and aesthetics of the culture that creates it.
- Music can cross borders and influence cultures other than the one that created it.
- Music in India has a long history and distinctive nature.

Essential Questions:

- What is the value of studying the music of another culture?
- What is distinctive about the traditional music of India?

Notes to the teacher:

You will need a collection of songs from various cultures and the means to play them for students. Choose from the following suggestions or substitute works of your own choice; it is important that you provide as much variety as you can find. The website RootsWorld: Listening to the Planet has many song samples available on its Web page, at <http://www.rootsworld.com/rw/>. Your local library may have CDs available, songs can be downloaded to an iPod, or you can find brief videos on YouTube (but let students only listen to, not view, the videos during Step 1 of the first activity). Here are some suggested artists:

Central American:

Mono Blanco, Mexico
Lila Downs, Mexico
Walter Ferguson, Costa Rica
Aurelio Martinez, Honduras
Paul Nabor, Belize
Andy Palacio, Belize
Rodrigo y Gabriela, Mexico
Líber Téran, Mexico
Umalali: The Garifuna Women's Project, various Garifuna communities in Central America
Camilo Zapata, Nicaragua

American Indian/ North American Indigenous:

Black Eagle Powwow, Jemez Pueblo
Kevin Locke, Lakota / Anishinaabe
Robert Mirabal, Taos Pueblo
Tanya Tagaq, Inuit / Canadian
Florent Vollant, Innu / Canadian
Mary Youngblood, Seminole /Aleut

West African:

King Sunny Ade, Nigeria
 Toumani Diabate, Mali
 Cesaria Evora, Cape Verde
 Etran Finatawa, Niger
 Salif Keita, Mali
 Angelique Kidjo, Benin
 Habib Koite, Mali
 Bassekou Kouyate, Mali
 Youssou N'Dour, Senegal
 Oumou Sangare, Mali
 Tcheka, Cape Verde
 Tinariwen, Mali
 Ali Farka Toure, Mali
 Rokia Traore, Mali

Indian:

Kiran Ahluwalia
 Asha Bhosle
 Niraj Chag
 Zakir Hussain
 Indian Ocean
 Prem Joshua
 Lata Mangeshkar
 Susheela Raman
 Nitin Sawhney
 Ravi Shankar

Chinese:

Liu Fang
 Hanggai
 Mamer
 Wu Man
 Guo Yue (or Guo Brothers)

Russian:

Gogol Bordello
 Elena Frolova
 ReelRoad

Middle Eastern:

Rahim Alhaj, Iraq
 Mosh Ben Ari, Israel
 David Broza, Israel
 Le Trio Joubran, Palestine
 Yasmin Levy, Israel
 (Sephardic/Ladino)
 Souad Massi, Algeria
 Idan Raichel, Israel
 Hossam Ramzy, Egypt
 Rachid Taha, Algeria

ACTIVITY 1 mentions the Beatles. This singing group originated in Liverpool, England, in 1960. From 1962 to 1966, four members (George Harrison, Paul McCartney, Ringo Starr, and John Lennon) toured together, becoming wildly popular in England, then the United States, and eventually around the world. They stayed together to write and record ever more sophisticated and original music until 1970. After that time, the Beatles went their separate ways. During their earliest years together, they were influenced by American musicians, including Elvis Presley, Chuck Berry, the Everly Brothers, and the Beach Boys. As they traveled, George Harrison acquired a *sitar* and an interest in Indian music, and they eventually incorporated Indian instruments into some of their songs, such as the *sitar* in “Norwegian Wood” and the *swarmandal* in “Strawberry Fields Forever.” Harrison even went to India to study with the brilliant sitar player Ravi Shankar. You may also wish to have one or both of these songs to play to your class.

In **ACTIVITY 2**, students are asked to brainstorm types of traditional musical instruments in three categories: Percussion, wind, and string. Percussion instruments are those that produce sound when struck, shaken, or rubbed; the human body can even be a percussion instrument (clapping hands, snapping fingers). Musicians use air to produce sound in wind instruments. String instruments produce sound from the vibrations of strings that are plucked, bowed, or struck.

Activity 3 is a research project for students. They can present their findings in whatever way you choose—for example, a PowerPoint presentation, poster, written or oral report. Here is some background information for you on the instruments students will be researching:

Sitar – a plucked *lute* with a long neck and adjustable hoop-shaped frets. It has five metal melody strings, two *chikari* or drone strings, and 13 sympathetic strings, or *taraf*, that produce resonance. It is played in Hindustani¹ music.

Sarod – a plucked *lute* with no frets and a metal-covered tapered fingerboard that allows for smooth slides, or *glissandos*. It has four metal melody strings and two *chikari*, along with 11 sympathetic strings. It is played in Hindustani music.

Veena – a large plucked *lute*, sometimes constructed as a *zither*, with four melody strings and three drone strings. It is played in Carnatic² music.

Sarangi – a bowed *fiddle* with three melody strings, usually made of gut, and up to 35 sympathetic strings. It is traditionally used as a secondary melody instrument to accompany singing.

Tanpura, or **Tambura** – a plucked *chordophone* (lute or zither) with three or four strings that provide the drone.

Bansuri, or **Venu** – a *transverse* bamboo flute. The venu is used in Carnatic and folk music, but the Bansuri has become an important classical instrument.

Shenai, or **Nagasvaram** – a loud, *double reed instrument* made of hardwood with a flaring metal bell, usually used as a folk instrument

Violin – The European violin is easily adaptable to Indian music—with its *fretless fingerboard* it can

perform the *glissandos* and *microtonal* pitches that are common in Indian music.

Harmonium – a portable *reed organ* with a small keyboard played with the right hand and a hand-pumped bellows played with the left. Adopted by Indian musicians during the time of British rule, it is a popular instrument for accompanying singing. It is always played *monophonically* (without other instruments) or as a drone instrument.

Tabla – a pair of drums used in Hindustani music, consisting of a wooden drum played only with the right hand and a bowl-shaped metal drum played only with the left hand. There is a black spot on each drumhead made of rice paste and iron filings that contributes to the instrument's tone and pitch.

Mrdangam (pronounced meer-DAHNG-gum) – a semi-conical two-headed drum used in Carnatic music. It is played on its side, allowing for both heads to be accessed.

Swarmandel – a “table harp,” is a 21–36 string plucked zither, used mostly to accompany Hindustani vocal music.

If you have advanced students, some may wish to research other topics besides the instruments, such as *raga* (the guidelines that specify the pitch, scales, and other elements of the melody); the rhythmic concepts called *tala*; the use of *improvisation*; and the presence of the *drone*, the constant pitch that provides the foundation for the raga melody. See the addendum at the end of this lesson for additional information.

¹ Hindustani classic music comes from the north and central regions of India.

² Carnatic music comes from the southern regions of India.

DURATION OF LESSON

2–3 class periods

ASSESSMENT

Class discussion

Chart on Handout 1

Research notes from Handout 2

Class presentation (poster, PowerPoint presentation, oral or written report)

Materials needed:

Music selections (see Notes to the Teacher) and means to play them

Photocopies of Handouts 1 and 2

Books, encyclopedias, and Internet access for research

Procedure:

ACTIVITY 1: Introducing Music of the World

1. As students enter the classroom, have an example of music from elsewhere in the world playing. When they are all seated, tell them that you are going to play a selection of works from different cultures and you want them to guess where the music comes from. Distribute **HANDOUT 1: Where in the World...?** and review the directions. Then play five short selections, two to three minutes each in duration, while students fill out the handout.
2. Replay 20–30 seconds of each selection and ask students to explain the reasons for each of their guesses. Then tell them the correct national origin for each selection.
3. Discuss which music was most appealing to them. Why? Remind them that just as there is no such thing as one type of “American music”—that our music has many forms for many tastes—music from another culture or region may have many variants.

MUSIC STANDARDS³

STANDARD 7. Understands the relationship between music and history and culture

LEVEL III (GRADES 6–8)

1. Understands distinguishing characteristics (e.g., relating to instrumentation, texture, rhythmic qualities, melodic lines, form) of representative music genres and styles from a variety of cultures
2. Understands characteristics that cause various musical works (e.g., from different genres, styles, historical periods, composers) to be considered exemplary
3. Understands the functions music serves, roles of musicians (e.g., lead guitarist in a rock band, composer of jingles for commercials, singer in Peking opera), and conditions under which music is typically performed in various cultures of the world

3 Source: McRel (Mid-continent Research for Education and Learning). See <http://www.mcrel.org/compendium/browse.asp>

4. Ask students why someone might choose to listen to music from another country. (Curiosity, desire to learn about another culture, universality of human emotions expressed through music, simple enjoyment) Ask students what they know about the music group known as the Beatles and then share information about the group from the Notes to the Teacher section. Emphasize how the Beatles' use of American and Indian elements influenced their music. If possible, play "Norwegian Wood" or "Strawberry Fields Forever."

5. Introduce the concept of globalization with respect to music. Ask students to brainstorm how music can cross national borders today. (Television, radio, Internet, iPod; presence of immigrant groups within a country; traveling musicians giving concerts; soundtracks to films; vacation travel)

ACTIVITY 2: Traditional music

1. Explain to students that before globalization, societies were more isolated, and traditional societies each developed their own forms of music and their own instruments. Start a web on the chalkboard with the center labeled "Traditional Uses of Music" and ask students to brainstorm as many uses as they can think of while you record their answers. Try to elicit as many of the following answers as possible and add your own:

- To listen for pleasure
- To make time go faster as you work
- To worship during a religious service

- To keep soldiers marching or boat crews rowing to a definite rhythm
- To record important events
- To develop a sense of community
- To entertain children
- To accompany dance

2. Ask students: How many of these are still reasons for music in our modern culture? (All of them) Do we use music for anything else? (Student answers will vary.)

3. Tell students that traditional musicians used traditional instruments. On the chalkboard, make three columns labeled "Percussion," "Wind," and "String." Explain what each term means. Ask students to brainstorm as many traditional instruments as they can for each category.

Suggested responses:

Percussion instruments: drums, sticks, gongs, bells, cymbals, xylophones, rattles, tambourines.

Wind instruments: panpipes, bagpipes, flutes, recorders; students may also suggest more modern instruments, such as clarinets, oboes, saxophones.

String instruments: those that are plucked (guitar, lute, harp, lyre, ukulele, banjo); those that are bowed (violin, viola, cello); and in more modern times, those that are struck (piano, hammer dulcimer).

4. Ask students to speculate about how these instruments were originally created. Have the students ever created a musical instrument themselves?

ACTIVITY 3: Research and presentation

1. Remind students that they have been learning about Indian culture as part of the study of *Like Stars on Earth*. Tell them that they will now start a research project about Indian traditional music. Distribute **HANDOUT 2: Indian Music Research Project** and review directions. Assign each student an instrument to research from the list below. Point out to students that, while most of these originated in India, some were borrowed from Western music because they produced sounds suited to Indian music.

- Sitar
- Sarod
- Veena
- Sarangi
- Tanpura, or Tambura
- Bansuri, or Venu
- Shenai, or Nagasvaram
- Violin
- Harmonium
- Tabla
- Mrdangam
- Swarmandel

If you wish, assign advanced students to research other aspects of Indian music, as described in Notes to the Teacher.

2. Provide time and access to materials (books, encyclopedias, computers) for students to research and prepare their presentations.
3. Give students the opportunity to present their information to each other, or if the presentation involves posters, to prepare a display for the school.



HANDOUT 1 Where in the World...?

DIRECTIONS: Listen carefully to each music selection that will be played for you. Then try to guess where the music comes from and enter your guess under “Origins.” Ask yourself: Why did I make this guess? Did I recognize any of the words? Is there something else about the music that makes me associate it with a particular part of the world? Fill in your reasons in the space provided.

SELECTION	ORIGINS	REASONS FOR MY GUESS
1		
2		
3		
4		
5		

HANDOUT 2 ► P.1 Indian Music Research Project

DIRECTIONS: You have been thinking and talking about the traditional uses of music and the variety of traditional musical instruments. Now it is time to learn more about the instruments that are used to produce traditional music in India.

Use resources provided by your teacher, the Internet, and your local or school library to find out the following information:

Name of your instrument: _____

What materials is this instrument made from? How is it constructed?

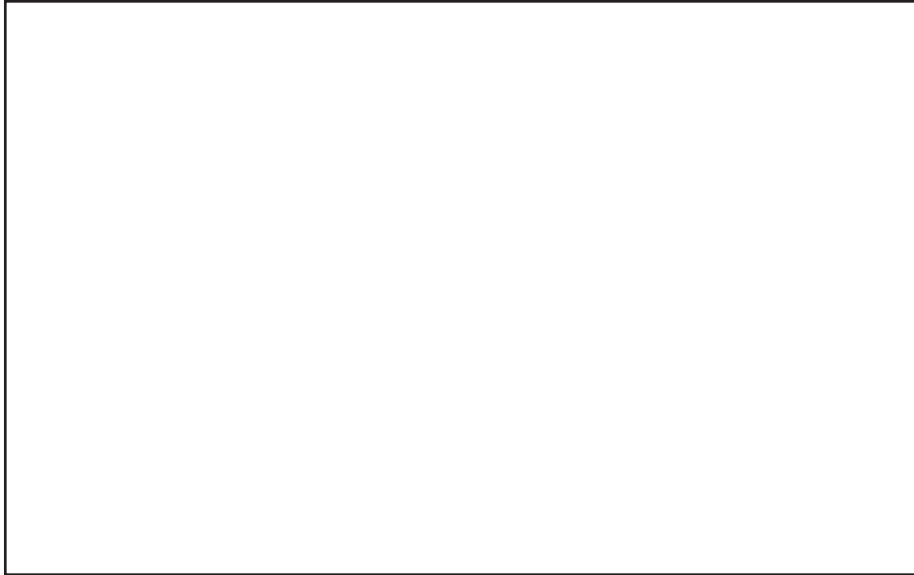
Draw a picture of your instrument below:



When were the first ones made? _____

HANDOUT 2 ► P.2 Indian Music Research Project

Does this instrument come from a particular region of India? If so, draw a map that shows where the region is.



How difficult is this instrument to play? What kind of training does the musician need to play this instrument?

What kind of music is this instrument used for?

Try to locate an audio recording of this instrument being played. After you listen to it, try to describe the sounds it makes.

Additional Information for Teachers

Indian Music

William Watson, Ph.D.

The music of India consists of many varieties or genres—a revered classical tradition dating back almost a thousand years, a collection of wide-ranging folk music, and a popular music tradition revolving around *filmi*, or songs from Indian motion pictures. Many different musical instruments also contribute to the unique *timbre* of Indian music.

Classical Music

Indian classical music is a synthesis of ancient *Vedic* chant and an equally ancient Persian musical tradition, dating back to 1000 BCE. Like all art forms in Indian culture, music is believed to have a divine origin, originating from the *Devas* and *Devis*—Hindu Gods and Goddesses. Ancient treatises describe the connection of the origin of the *swaras*, or notes, to the sounds of animals and birds and people's effort to simulate these sounds through observation and perception. Classical music has two main traditions that are geographically based—*Hindustani*, from the northern and central regions of the country, and *Carnatic*, from the southern region. *Carnatic* music diverged from the *Hindustani* tradition beginning in the 12th century CE. Though there are several stylistic differences, these principal qualities are common to both:

- Melodies are constructed according to the guidelines of *Raga*, which includes the following components:
 - A tuning system, which determines the pitches that are performed. In contemporary practice, the 12 *chromatic* pitches are used, but traditional

microtonal pitches called *shrutis* are still sometimes employed.

- A scale system, which determines the relationship between pitches, called *That* (tot). The ascending form of the scale is called *Arohana*; the descending form *Avarohana*. Scales may be the same or different in ascending and descending forms. Each pitch or *swara* within the scale has a name, similar to *solfege* syllables; these are *sa, re, ga, ma, pa, dha, ni*.
- The tonic, or starting point in the scale, called *Sa*. Additionally, other pitches may be given important roles: a principal tone called *vadi* and a secondary principal tone called *samvadi*. These are pitches upon which a musician may dwell in the performance of a raga, and the tones vary among ragas.
- Certain melodic *motives*, called *Pakar*, that are associated with the particular raga.
- Certain *ornamentation* practices, called *Gamak*, that are associated with the particular raga, but may vary according to the instrument being played.
- Extramusical associations, called *Rasa*, which determine the appropriateness of the raga for a particular time of day, a certain season, or for its ability to express certain emotions.
- Indian musicians study the intricacies of *raga* for a number of years, along with the technique of their instrument, in small schools called *gharanas*. They will study with a master teacher called a *guru*.

- Master musicians are awarded titles of respect—Hindus are called **Pandit** and Muslims are called **Ustad**.
- Rhythmic concepts called **Tala**:
 - Originally based on the qualitative accents of ancient Sanskrit poetry, where syllables are not emphasized through loudness, but rather by holding them out longer than unaccented syllables.
 - **Tala** are patterns consisting of beats of varying lengths.
 - **Tala** patterns may be simple, such as **tintal**, a 16-beat pattern of 4+4+4+4, or may be complicated, such as **chachar**, a 14-beat cycle of 3+4+3+4.
 - The stress is usually placed on the first beat of the pattern, called **Sam**.
 - The opposite of the **sam** beat of the cycle is called **Khali**, which literally means “empty.” This beat is de-emphasized.
 - Other beats are called **tali**; they are neither emphasized nor de-emphasized.
 - **Tala** can often be identified by listening to the sounds of the drums: the low drum will usually play a muffled tone on the **khali** beat, usually the third set of beats in the cycle.
- **Improvisation** by a melodic soloist is expected and highly valued:
 - Classical performances in India, in contrast to classical music performances in the United States and Europe, feature extended improvisations, where an instrumentalist or singer will use the principles of **Raga** to weave intricate spontaneous musical material.
 - These improvisations entail making hundreds of quick decisions regarding which pitches and rhythms to perform, all the while ensuring that the rules and traditions of the piece’s **Raga** are followed.
 - Musicians study the art of improvisation for years in a small music school or studio called a **gharana**, where they work closely with a master of the instrument (or voice) called a **guru**.
- The **drone**
 - One of the most unusual qualities of Indian Classical Music is the use of the drone, which is a constant sounding pitch that creates a tonal foundation for the **Raga**.
 - Drones do not change during a musical piece, in contrast to Western music, where the bass line moves according to a **progression**.
 - Traditionally, the drone is performed on a stringed instrument such as the **tanpura**.
 - Drone instruments do not play any specific rhythm, but rather keep the strings vibrating throughout the musical piece.
 - Most frequently the drone consists of the **tonic** and **fifth** pitches of the scale being played.

- Accompaniment by a drummer
 - Indian classical music employs a single drummer who plays a pair of drums called **tabla** in Hindustani music, and **mrdangam** in Carnatic music.
 - Drummers play their drums with the fingers; they never use sticks.
 - Drummers play according to the **tala**, which is the rhythmic concept in Indian music.
- A unique **timbre** caused by the ringing of sympathetic strings, called **taraf**, and the buzzing of strings against a uniquely shaped string-instrument bridge called **jivari**.

Folk Music

The vast majority of India's population still lives in rural villages. The ethnic diversity of the country is reflected in the many different styles and instruments used in its folk music. By definition, folk music is that in which songs are "old," where composers are not credited, and songs are transmitted primarily orally. A few of the traditions are **Bhavageetee**, **Pandavi**, **Baul**, and **Bhangra**. Tribal and folk music are not taught in the same way that Indian classical music is taught. There is no formal period of apprenticeship where the students are able to devote their entire lives to learning the music; the economics of rural life does not permit this. Music in the villages is learned almost by osmosis. Folk music is an indispensable component of functions such as weddings, engagements, celebrations of births, and other social activities. There are also many songs associated with planting and harvesting. In these activities the villagers

routinely sing of their hopes, fears, and aspirations. Folk music is also used for educational purposes, instructing teenagers what to expect as they become adults and venture into marriage.

Musical instruments for folk music are often different from those found in classical music, and these instruments are generally not as refined as those that the classical musicians use. The instruments of classical music are crafted by professional artisans whose only job is the fabrication of musical instruments. In contrast, the folk instruments are commonly crafted by the musicians themselves.

Filmi Music

In the early years of Indian cinema, classical and folk music were used in the soundtrack. However, in the late 1940s, American popular music styles began to influence Indian movies, most of which contained several staged musical numbers. Most of the films made for national distribution were produced in Mumbai (formerly Bombay, hence the nickname **Bollywood**; see Lesson 8 for more information). All music used in Indian films is prerecorded in a studio by a **playback singer**. The actors then lip-sync the song for the camera. The actor's singing voices are not recorded, and no one cares that the singing and speaking voices are different. Songs from **Filmi** are popular in India and elsewhere in Asia, and often the recorded songs are released prior to the release of the motion picture so audiences will be familiar with the songs before they see the film.

There have been a number of significant changes in the Indian film industry since the 1970s. The introduction of television throughout India caused a decrease in cinema attendance, though the introduction of the VCR and DVD increased the profits of the film studios. There have also been some recent claims of plagiarism from both the American pop music industry and among Indian film music producers.



Teaching the Dyslexic Child

Travia Fuller, M.A.

Hearing the term “learning disabled” about a student evokes a range of emotions for the teacher, the parents, and especially the student. If the child is to succeed academically, it is critically important for educators to become informed about what specifically the learning disability is and how that affects the student individually.

As with most things in life, there is no “one size fits all” solution for any learning disability; this is especially true for a person diagnosed with dyslexia. “Dyslexia,” which comes from the Greek and means essentially “difficulty with words,” is a learning disability that affects a person’s ability to process written language. Dyslexia is as unique as the person who is diagnosed. A common symptom is the reversal of letters and numbers. For example, the child may see the letter “b” as the letter “d” or the word “mug” as the word “gum.” These symptoms may lead to difficulty in sounding out words phonetically; the child may read words incorrectly, even words that he or she has seen several times. All this contributes to the child’s reading below grade level. Usually human activities require either the left or right side of the brain. According to Rooney (1995), research has proven that the process for acquiring language uses both sides of the brain.

Dyslexia is not a disease, and thus it cannot be cured by medication. According to *Science Teacher* magazine (2005), Yale scientists identified a gene they believed to be linked to dyslexia. This research proves that dyslexia is not the result of brain damage and is a lifelong disability. (Loss of the ability to read due to brain damage is known as *alexia*.) Furthermore, the research indicates that as

much as 20 percent of people with dyslexia carry this gene. The belief is that this new discovery will lead to better diagnosis and more in-depth information about how the reading process works. Proper diagnosis is the first step to appropriate educational interventions.

Although dyslexia is a brain-based diagnosis, it is not necessarily related to a person’s intelligence. As the art teacher Ram Shankar Nikumbh points out to his class in the film *Like Stars on Earth*, many famous, intelligent, and even brilliant people are or have been dyslexic, including scientists Albert Einstein and Alexander Graham Bell, who were believed to be dyslexic. Celebrity actors Whoopi Goldberg, Tom Cruise, Robin Williams, and Orlando Bloom are also dyslexic. Former professional athlete Bruce Jenner is dyslexic. A Google search would result in an even more extensive list. Such a list of high achievers dispels the myth that dyslexic students are poor readers because they are unmotivated, have a bad attitude, or come from a poor environment.

How does the dyslexic child feel and behave?

A person diagnosed with dyslexia will usually have difficulty with the phonological connection to letters. Normally, after a child learns the alphabet, the teacher then provides instruction on how to associate a sound with each letter. Next, the teacher instructs the students about the sound associated with a combination of letters. This is referred to as blending. After these numerous repetitive lessons, students should then be able to “sound out” words. If any of these steps are not mastered, a child’s word attack skills are hindered and thus so is reading comprehension and in many cases writing.

Because a dyslexic child has difficulty with sequencing, memorizing the alphabet is difficult. All subsequent steps become that much more difficult. Because of the tremendous amount of mental energy that it takes the child diagnosed with dyslexia to keep the words and letters in order, he or she may have difficulty tracking words on a page.

By the time a dyslexic child finally arrives at the expected reading place or answer, he or she may appear angry, anxious, depressed, and/or defiant. This is most likely a direct result of the stress of the task, embarrassment at struggling with a task others seems to find easy, a history that lacks positive school experiences, and the child's own inability to predict success or failure. In most cases, the child feels that he is working hard and giving the best effort possible, but it this effort may be perceived differently both by teachers and parents. Author and dyslexic Gerard Sagmiller has vividly described his dyslexia as feeling like he is running a race, but he has hurdles in his lanes and other racers do not. The starting shots are fired and the race begins. The others run and complete the race with no problems. Sagmiller tries to jump over his hurdle and falls flat on his face (Sagmiller, 2002).

Positive and negative ways of compensating for dyslexia

If a child is suspected to have dyslexia, it is important to get the child a formal diagnosis by a reputable professional, such as an educational psychologist, educational specialist, or a person specifically trained in diagnosing learning disabilities. In some schools, there is a team of professionals who conduct various parts of the evaluation. As a team they make a recommendation on intervention.

From the onset, it is important that the students view dyslexia as a positive experience from diagnosis to intervention. Talk to the child with or without parents, about what you have noticed in reference to academic difficulties. This conversation will help you understand how dyslexia manifests itself in the child. Most children can articulate what it feels like or can draw a picture of what they see. The child needs to understand that the diagnosis is not a definition of him or her as a person. Remember that the severity and characteristics of dyslexia are different for everyone. Discuss with the child the remediation and intervention necessary to achieve success in those areas that require language processing. Then, provide appropriate remediation and intervention on a consistent basis.

There is no script or phonetic remediation program created specifically for a child diagnosed with dyslexia. The teacher or other professional assigned to remediate the student should be prepared to provide a systemic and direct approach to teaching phonics. The teacher should develop an individual plan based on the student's weaknesses. This plan should include methods that are multisensory. Adding a sensory experience (something to see, listen to, taste, smell, or touch) to a word-attack lesson will greatly increase the child's ability to retain the information.

In addition, there are software programs or games that are aids and sometimes motivators for some children. The intensity of this instruction will depend on the severity of the child's dyslexia. The teacher must remember that effective remediation begins with positive interaction with the student. The child will live with this language deficit now and for the rest of his or her life. It is

extremely important to encourage and expect the child to be an active participant in learning or relearning how to become a better reader.

Teachers need to know...

There are primarily two methods to teach someone to read. One way, often referred to as phonics, involves the recognition of sounds and symbols, the association of individual sounds or combinations of sounds with meanings. This is usually done through repetitive practice and drills. Teachers may use nonsense words to avoid the child's dependence on context and sight. Students are encouraged to know individual and blended sounds.

The second method, called whole language, involves a large sight vocabulary and usually does not require blending of words separately. The method used to teach reading varies according to the school. Some schools use one single method, while some use a combination of both. Good instruction is important for every learner.

- Learning objectives should be clear and organized and, preferably, written and read aloud to the class.
- Specialists agree that a multisensory approach is especially helpful for a dyslexic student. In some instances, tape-recorded instructions may be necessary. There are other assistive devices, such as alphabets charts, calendars, and time lines.
- Assignments chunked in manageable parts combined with flexible due dates may also be appropriate.
- Academic assignments, especially those that involve reading and writing, should be focused on quality versus quantity.

- Cooperative learning, kinesthetic learning, concrete examples, and extra time can be especially helpful when used appropriately.
- The child may also need help finding an area, academic or nonacademic, that will help build self-esteem and confidence. This, coupled with praise and encouragement, is a recipe for success.

REFERENCES

- Rooney, K. (1995). "Dyslexia revisited: History, educational philosophy, and clinical assessment applications." *Intervention in School & Clinic*, 31(1), 6. Retrieved July 18, 2010, from MasterFILE Premier database.
- "Dyslexia-linked Gene Discovered." (2005) *Science Teacher*, 72(9), 14. Retrieved July 18, 2010, from MasterFILE Premier database.
- Sagmiller, G. (n.d). *Dyslexia My Life*. Retrieved July 18, 2010, from <http://www.dyslexiamylife.org/>.